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PHARYNGEAL AND NASAL SURGERY BY THE GALVANO-CAUTERY, WITH A REPORT OF CASES.

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[Read before the Chicago Medical Society, September 20.]

New methods of utilizing the galvano-cautery are constantly being devised. Both the battery and electrodes have recently been so improved as to materially extend its field of usefulness, and the discovery of the local anæsthetic, hydrochlorate of cocaine, has been of inestimable benefit in the same direction. Its applications, if properly managed, are attended with little or no pain, it is rapid in action and satisfactorily thorough, oftentimes brilliant in its results. In nasal, pharyngeal and even in laryngeal surgery its utility is particularly manifest. No other means has so augmented the remedial powers of the rhinologist. Pathological conditions of the upper respiratory passages which have long

baffled the most skillful therapeutists are now effectually remedied through the medium of this agent.

The few cases herewith reported are grouped together only because of the similarity in the means of treatment, although each case is of interest from a pathological as well as from a therapeutic point of view.

CASE I.—*Folliculous Pharyngitis with Hypertrophy in the Angles of the Pharynx.*

Doctor —— has suffered for an indefinite period from fullness, soreness and pain in the pharyngeal region. He has frequent attacks of acute pharyngitis, and at such periods of exacerbation, his sense of hearing is affected, evidently by extension of the inflammatory process through the Eustachian orifices, a common sequence, and one of especial moment in his case.

Status Præsens.—By reflected light the oro-pharynx is seen to be intensely congested, and three or four isolated follicular enlargements appear on the posterior pharyngeal wall ; but most conspicuously prominent are two enormous hypertrophied follicular masses which occupy the latero-posterior angles of the pharynx. These masses, one on each side, jutted inward and forward from behind the posterior pillar, and were of the thickness of a lead-pencil and about three-fourths of an inch in length, each with the adjoining tonsil presented the appearance of a double tonsil with the parts separated by the posterior palatine fold.

In the normal state, isolated follicular glands, called muco-lymphoid follicles, are imbedded in the pharyngeal wall. Each in its simplest form consists of a depression of the mucous membrane lined with its epithelium, and enveloped in a stratum of reticular connective-tissue, entangled in which are innumer-

able lymphoid cells, lymphoid bodies (closed follicles) and lymphatic and other vessels. Morphologically, they are of the same structure as the tonsils, the latter representing large aggregations of such simpler glands. Hypertrophy of these muco-lymphoid follicles is the chief pathological condition characterizing folliculous pharyngitis. The same changes take place, which occur in the tonsil when it is in a state of chronic hypertrophy. The inflammatory process leading to cell-proliferation involves every structural element of the gland; its secretion is retained, accumulates and undergoes degeneration, and the follicle thus metamorphosed becomes a center of irritation into which course numerous enlarged blood-vessels, which serve to maintain continued congestion of the parts. Now a whole chain of these muco-lymphoid follicles ranges along in each latero-posterior angle of the pharynx, behind the posterior pillar, and it is the hypertrophy of this entire row of glands on each side which is the chief feature in the case now under consideration. Although rarely as enormous as in the present instance, hypertrophy in this particular locality is not uncommon, but it is usually overlooked or regarded as of too little consequence to necessitate treatment of an active nature.

Treatment.—Destruction of the hypertrophied follicular masses was evidently the only effective remedy, and the galvano-cautery suggested itself as the means best adapted to the end. I extemporized an electrode for the purpose by uncoiling the wire end of a Flemming moxa-electrode, thus converting the platinum coil into a loop three-fourths of an inch long, with two parallel side wires one-eighth of an inch apart. This was so curved as to be capable of accurately approximating the mass.

It was applied first cold, pressed firmly against the part and

the battery then connected. Instantly the loop became white hot, and produced its slough. By breaking the current, it at once became cool and was ready for withdrawal. It caused very little pain, no hæmorrhage, and but slight subsequent irritation. Several operations were necessary to entirely destroy the growths. They were performed alternately on the two sides, always allowing sufficient interval between operations on the same side for separation of the slough and cicatrization.

The few isolated follicular enlargements on the posterior wall of the pharnyx were destroyed in like manner by the Flemming point-electrode.

The result is highly satisfactory. Nearly a year has elapsed since the operations, and the pharynx remains free from hypertrophies.

In this connection I would note that topical applications, in cases of chronic folliculous pharyngitis, of medicaments other than those which affect destruction of the individual growths, are futile and oftentimes worse than useless.

CASE II.—*Folliculous Naso-Pharyngitis, or Adenoid Vegetation* at the vault of the pharynx. Operations by the Galvano-Cautery Ecraseur.

Miss —— has complained of catarrhal disease of the upper respiratory passages involving the nose, naso-pharynx and larynx. Purulent nasal and pharyngeal discharges, hawking screatus, cough, hoarseness and a nasal intonation are the chief symptoms. She takes cold easily and frequently, and at such times suffers exacerbation of all symptoms. Examination, in addition to morbid conditions of other parts, revealed numerous hypertrophied follicular masses—so called adenoid vegetations—covering and filling up the vault of the pharynx. Some of these appeared in

the rhinoscopic mirror as pendent pear-shaped bodies; others were sessile, and still others had the appearance of several cockscombs crowded together. There is nothing unusual thus far about the case. Its pathology has been many times described, and I will review it but briefly, as it is to the method of operating that I desire especially to invite attention.

Normally, muco-lymphoid follicles, of the same adenoid structure exactly as those in the pharynx, are imbedded in the mucous and sub-mucous tissues of the naso-pharynx. A number of these are grouped together, forming a compound gland, analogous to the tonsils and known as the pharyngeal tonsil, or the tonsil of Luschka. In the normal state this is scarcely of sufficient size to deserve such appellation, but when hypertrophied, as it frequently is, it bears a striking resemblance to the true tonsil. The tonsil of Luschka and the surrounding isolated muco-lymphoid follicles, like the analogous structures in the oro-pharynx, are exceedingly prone to undergo the hypertrophic process, attaining at times an enormous development. This constitutes one form of post-nasal catarrh, the general symptoms of which are so familiar as to render it unnecessary to enumerate them.

Treatment.—Removal of the hypertrophied masses is the only satisfactory means of relief.

This I first sought to accomplish in the present case with a Loewenberg cutting forceps, an instrument especially designed for the purpose, but the effort resulted unsatisfactorily. Several other methods were tried and abandoned, until finally I found that the object could be attained most easily, and with the least pain and inconvenience to the patient, by means of a galvano-cautery ecraseur.

It was necessary to construct an ecraseur for the case, which I did by first bending a probe to exactly the proper curve to pass behind the *velum palati* and touch the hypertrophied masses, and then making a pair of Flemming's parallel tubes to conform to the same curve, and threading them with platinum wire to form the loop. Withdrawing the soft palate by a Voltolini palate-hook, the naso-pharynx could be thoroughly sprayed with cocaine solution, which not only rendered the operation painless, but entirely prevented the retraction of the velum consequent upon a disposition to gag, so that a perfect rhinoscopic image of the parts could at all times be obtained; that is, I could see exactly what I was doing, even during the snaring.

The patient controlled her own tongue by means of Türck's tongue-depressor. Guided by the rhinoscopic image I introduced the ecraseur and caused it to encircle one of the growths, and at the same time, by tightening the wire somewhat, to grasp it firmly. Then, by connecting the battery, the loop was heated instantly to redness. It was rapidly wound in on the windlass and the vegetation thus severed at its base. There was no pain, no hæmorrhage, and but little subsequent irritation. The operations were repeated weekly for a number of weeks, until the growths were entirely removed.

CASE III.—*Malformation of the Anterior Pillars of the Fauces.*

Mr. —— has complained for some years of a sense of constriction in the pharynx, as if his throat were too small, and also of the habit of snoring. The latter is so loud and so frequent as to be a nuisance to his wife and family, and a disturbance to himself, inasmuch as he is often awakened at night by his own noise.

On inspecting the parts I was first impressed by the very

small size of his throat, in comparison with the rather broad dimensions of the individual, including his neck and head.

I have often noted the real narrowness of the pharynx in fleshy persons, and I attribute it to a deposit of adipose material in and between the pharyngeal muscles to such an extent as to encroach on the free space within. This would explain the increase in the severity of Mr. ——'s symptoms, as he has gradually grown stouter. The tonsils were somewhat hypertrophied, but what was of still more importance there was found to exist a malformation of the anterior pillars of the fauces, *i. e.*, of the palato-glossal folds. These pillars are formed by the palato-glossal muscles, inclosed by connective-tissue and mucous membrane. Normally the muscle proceeds each from the anterior and lateral portion of the *velum palati*, sweeps over the anterior edge of the tonsil and, extending forward, is attached together with the stylo-glossus muscle to the side of the tongue near its root. In this case the folds originated properly, but increasing in breadth they covered not only the anterior edge of each tonsil, but also a considerable portion of its inner surface, and then, a part only of the fold continuing in the normal pathway forward to the side of the tongue, the larger portion swept *backward* and incorporated itself with the posterior pillar, forming a thick band which continued downward in the latero-posterior angle of the most inferior portion of the pharynx.

In their normal relations the palato-glossal folds assist in drawing the velum forward, and so aid in maintaining sufficient space between it and the post-pharyngeal wall for free and noiseless respiration through the nose.

Their abnormal attachment and development tended to destroy this balance of muscular power, and, as a result, the post-palatine space was so contracted that the air-current pass-

ing to and fro, especially during sleep and in the recumbent posture, caused forcible vibration of the soft palate, or snoring.

Treatment.—I determined to excise the overgrowth of each tonsil, together with the portion of the anterior pillar which covered it, by means of the galvano-cautery ecraseur, and at the same time to sever, as low down as possible, the attachments of the anterior pillars to the pharyngeal wall.

Piano wire No. 5, a steel or tempered iron wire, replaced the usual platinum coil in the ecraseur, because its resiliency, a property totally wanting in platinum, permitted a better adaptation of the loop to the mass. Having sprayed the parts thoroughly with a four per centum cocaine-solution, I first nicked with scissors the muscular band at its attachment to the posterior wall, in order that the wire could catch hold at that point. Then encircling the part by the loop of the ecraseur and connecting the battery, the wire at once was heated to a cherry-red. It was rapidly wound in and the tissue was thus removed.

After cicatrization had occurred a similar operation was performed on the other side.

The result is very satisfactory. The configuration of his pharynx approximates the normal; the sense of constriction has disappeared, and the habit of snoring, although not entirely cured, is much relieved.

CASE IV.—*Membranous Occlusion of the Posterior Nares.*

This case I reported at length in a paper read before the Chicago Medical Society a year ago. I briefly review it, now, because of its special interest in this connection, and to report permanence of cure, and progress in the almost complete alleviation of all catarrhal symptoms which was unhoped for at that time.

Mr. E., age about 40, has suffered during the past thirteen years from a complete obstruction of the left nasal chamber. Most violent paroxysmal headaches, constant soreness on top of the head, vertigo, especially on stooping, and various indescribable cephalic sensations of a most distressing character, have served to render his life miserable.

Thick, viscid and foul muco-purulent crusts accumulated in the left naris and in the naso-pharyngeal space, which he could neither expectorate nor evacuate by "blowing the nose," on account of the impenetrability of the nostril to currents of air. Partial occlusion, also, of the right nasal chamber necessitated frequent and prolonged resource to mouth-breathing, and he has suffered in consequence from atrophic pharyngitis and laryngitis, with painful deglutition, cough, severe asthmatic paroxysms, and the like. The expired air had imparted to it a disgustingly fetid odor. During all these years he has been treated for consumption, bronchitis, catarrh, neuralgia, rheumatism, and other complaints,—a rhinoscopic examination never having been made. He was referred to me by my friend Dr. R. H. Babcock, of this city.

It was only after some days' cleansing of the parts and training of the patient that I could get a perfect rhinoscopic image. It was found that a tense membrane covered the left choana almost completely. Its free edge was thin and sharp and approached so near to the septum that, as seen in the drawing, only a very small chink remained between it and the *septum narium.* The left *ostium tubæ* could not be seen, the membrane evidently lying behind the Eustachian orifice, and so intercepting its image. The choana upon the right, also, was

partially covered by a membrane which extended about half way across the aperture and which was much thicker and less tense than that upon the left side.

Treatment.—The galvano-cautery knife-electrode at once occurred to me as the most effective means of removing these membranous obstructions.

The patient was practiced daily for one week in the use of the rhinoscope and in the introduction of instruments. A flexible silver probe was bent by numerous trials to exactly the proper curve to pass readily, through the mouth and naso-pharynx, into the chink on the left side and to pick up the edge of the membrane, and then a straight knife-electrode was made to conform to the same curve.

First Operation.—The patient held his own tongue by means of Türck's tongue-depressor. I introduced the knife-end of the electrode, one-half inch long, through the chink and pressed its edge against the membrane, backward. The current was made at the battery, the knife end became in an instant red hot and the membrane was incised without bleeding and without sufficient pain to cause the patient to wince. In another instant the current was broken and the electrode cooled in a few seconds and was withdrawn.

After incision the membrane, which had been very tense at its edge, retracted from each side, leaving a surprisingly large opening.

The delight of the patient, when he discovered that he could again breathe through that nostril, was a pleasure to behold, and from that moment he has been completely relieved of all cephalic symptoms, including the left sided deafness.

I found the floor of the nose, the septum and the turbinated bodies thickly incrusted with horribly fetid cheesy masses, the accumulated, decomposed and desiccated secretions of years.

These were so firmly adherent that they could be detached only by means of a probe during a period extending over several days.

Their presence, for so many years, had served to excite a bad naso-pharyngeal catarrh of an atrophic type, which at that time I had little hope of benefiting, but as an illustration of the recuperative powers of nature, even this complication, in the absence of the original cause and under favorable treatment extending over several months, has so far improved as to occasion, practically, no annoyance.

Additional operations, to the number of seven or eight, were performed in exactly the same manner, now on one side and then on the other, until both posterior nares were widely patent and in an approximately natural condition.

These are but a few of many cases wherein I have found the galvano-cautery of the utmost utility. Doubtless the several operations could have been performed by other means, but not without procedures so much more formidable that both the surgeon and patient would have preferred to forego operation.

Certainly this agent can be abused, and a word of caution is not unnecessary in this respect. There is reason to believe that injurious effects have already been produced by it, especially in the nasal regions. Morell Mackenzie warns some of his younger *confrères*, "that it is unnecessary, where no inconvenience is felt, to restore geometrical symmetry to the turbinated bodies or to invest the lining membrane of the nose with artistic merit," and he fears "that the nasal passages have occasionally been 'cleared' with a zeal and energy worthy of the industrious backwoodsman." But while deprecating unnecessary aggression in these regions, he at the same time asserts that there are many cases that can only be cured by active treatment. Accurate diagnosis, precise indications for its use,

and a certain amount of skill on the part of the operator, are essentials to the judicious employment of the galvano-cautery.

The battery and electrodes which I employ, and which I take pleasure in exhibiting to the Society, are manufactured by Otto Flemming, of Philadelphia, from suggestions furnished by Carl Seiler. The battery has advantages over any other that I have seen. Not the least of these is the arrangement by which the plates may be immersed and withdrawn from the fluid by means of a pedal easily manipulated by one foot. Electrodes can be devised and altered from the standard ones to suit individual cases.

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FAVUS—A CLINICAL LECTURE.

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[Reported by B. VAN SWERINGEN.]

GENTLEMEN:

I wish today to call your attention to the study of a disease which belongs to a different class from those which we have recently been considering. It belongs to the class known as "Parasitic Diseases" of the skin. We have, as most of you are aware, two principal forms of parasite giving rise to the diseases of this class, viz.: "animal" and "vegetable." The various forms of pediculosis and scabies constitute the diseases caused by the animal parasite. Arising from vegetable origin we have three forms of disease, the manifestations of each being somewhat different, as likewise, the vegetable parasite, fungus or growth giving rise to them. They are "tinea versicolor" (a case of which you saw a few days ago), "tinea trichophytina," or ringworm (under which head three different manifestations, differing only on account of location,

are embraced, viz.: tinea cincinata, or ringworm of the non-hairy skin; tinea barbae, tinea sycosis, or barbers' itch, which is the same thing, as it occurs in the bearded region, and tinea tonsurans, which is also the same thing only occurring in the scalp), and "tinea favosa," or "favus." It is to the last named disease that I will now confine my remarks.

Before examining the two patients before you, which are both typical cases of favus, let me ask that you first get a good general idea of the symptoms, characteristics, and clinical history of the disease, without which it would be impossible to examine and study the disease, as it manifests itself in these or any other cases, intelligently.

Being a parasitic disease, it of course results from contagion; its contagious character may then be mentioned as the first characteristic of the disease.

It is always a scalp disease, though the non-hairy skin, and even the nails, may occasionally be coincidently affected, as in the plate I now show you.

It is a comparatively rare disease, occurring with about the same frequency as lupus erythematosus, and, like that disease, is much more common in Europe than in this country.

The disease is first seen as one or several small yellow spots beneath or within the epidermis.

In from two to four weeks these spots enlarge and form pea-sized, cup-shaped, yellow, sulphur-colored crusts, each penetrated by one or more hairs.

These cup-shaped crusts, now, upon removal, leave a correspondingly depressed, moist, reddened surface.

As the disease advances these lesions, which are as yet discrete, become confluent and fused into a general, continu-

ous mass of yellow, sulphur-colored crusting; though here and there, especially near the margins the cup-shaped character may usually be observed.

The condition, as I now describe it, represents the disease as usually first seen by the physician, and may, if of very long standing, involve almost the entire scalp, or may be confined to patches here and there.

The crusts in this disease always have their own peculiar consistence, being more friable and brittle, perhaps, than the crusts of any other form of skin disease, breaking down almost like cheese.

There is usually not much inflammatory trouble, though the skin is usually hyperaemic and pus may be formed: the crusting, however, as demonstrated by the microscope, is largely composed of the fungous growth rather than of dried pus or other inflammatory product.

The hairs, including the follicles, being invaded by the parasitic growth, now become loose, lustreless and brittle.

If the disease continue, the follicles, from the irritation and inflammatory action, become in time completely destroyed and the hairs are not reproduced, leaving smooth, partly bare places sometimes, here and there, as a relic of the disease, it having then undergone, to some extent, spontaneous cure in such places.

The disease may be limited to one or two small patches or it may involve almost the entire scalp, though there is no tendency to symmetrical distribution as in seborrhœa, psoriasis, etc.

It is a very chronic affection, lasting sometimes for a great many years.

It generally begins in childhood.

The subjective sensation is usually that of mild or moderate itching.

The crusts may be all removed by careful washing and cleansing, leaving a surface apparently almost free from disease, but under favorable circumstances—heat and moisture—they will be very rapidly reproduced; giving in a very few weeks the same appearance as before.

The affected part has a characteristic odor, described as resembling the smell of mice.

The disease may, lastly, be characterized by its transmissibility to or from numerous lower animals, as cats, dogs, rabbits, mice, etc.

The disease is of course not a constitutional one, but purely local.

CASE I.—The history of this boy's case is substantially as follows: He is eleven years of age, and has had the disease for seven years. Otherwise he is apparently healthy. He gives us no history of contagion as a cause of the disease in his case, but upon questioning him we find that a little brother has a similar spot on his scalp, which would tend to show the first characteristic referred to, viz., contagion.

CASE II.—In the history of this case there is nothing of particular interest, more than that he is twenty-five years of age, and has been afflicted with the disease for seventeen years. He, like the boy, has been treated more or less by numerous physicians during the entire career of the disease, without receiving any permanent benefit; this fact tending to show the very stubborn and chronic character of the disease.

The patients will now pass around among you, and you will please observe the various points which I have enumerated as characteristic of favus. You will first readily observe that

the disease is confined to the scalp; but the earlier manifestations of the disease you will be unable to see in these cases of so long standing. Less than two weeks ago the crusts, by treatment, were almost entirely removed, but, in order that you might see and study the disease in its typical, untreated state, I have allowed them to re-accumulate undisturbed. Toward the margin, where the lesions are more or less discrete, may be seen some of the characteristic cup-shaped crusts. You will observe that the crusting is yellowish or sulphur-colored, that it is very brittle, differing in the latter respect from crusting composed of a purely inflammatory product; and that when the crust is removed we do not find the active inflammatory condition of skin characteristic of truly inflammatory diseases, as eczema, for instance. I will next call your attention to the condition of the hairs in these cases. You will observe that they are dry and lustreless, loose, brittle, and broken off. You will observe in Case II a partly bald, smooth patch. This represents a place where the disease has undergone spontaneous cure, the follicles having become so involved in the process that the hairs have fallen out and were not reproduced. You will find, if you direct your attention to the odor of the affected parts, that you get the characteristic so-called smell of mice. We have stated that children were more susceptible to the disease, and we find in both of these cases that the disease was contracted in childhood. As regards subjective sensation, we find that while there is some itching in these cases it is of a very mild or insignificant character. Thus we find in these cases most of the symptoms referred to as characteristic of favus.

Etiology.—As the disease is a parasitic one, it is like all the other diseases of this class, whether of animal or vegetable origin, caused by the development of a parasite. The

parasite in this, as in all the vegetable parasitic diseases, is a vegetable organism, fungus or growth, and is received and communicated by contact; the disease being therefore a contagious one. As previously stated, the disease is met with in certain of the lower animals, and may therefore be derived from this source. It is likewise, of course, communicable from one person to another, the only requisite being a favorable soil for the development of the fungus when deposited by contact; the most favorable site being the scalp. The disease may be communicated through the medium of certain articles upon which some of the parasitic growth has accidentally or otherwise been deposited, as articles of clothing, towels, combs and brushes, etc. Like all other diseases, some individuals are more susceptible to it than others. It is usually met with among children, especially the uncleanly; adults being peculiarly exempt from it.

Pathology.— The microscopical organisms or vegetable growth to which the disease is due, upon being deposited upon the skin, gains lodgment beneath some of the superficial layers of the epidermis, particularly in the depression around the roots of the hairs. It then, as it grows and multiplies, burrows in all directions, down into the follicles, into the hair bulbs, and even the tissues of the shaft of the hair for a short distance from the scalp, though not to the same extent as the similar parasite of tinea tonsurans. They soon become so aggregated as to form a small yellow spot with a thin covering in the horny layer. This soon increases in size and forms the characteristic yellow cup-shaped crust, and is, of course, composed almost entirely of the vegetable growth. The nutrition of the hair is thus interfered with and in due time the hair loses its lustre, becomes brittle,

the bulb atrophies, loosens, and the hair falls out; it may grow in again, but if the disease continue long enough the follicle becomes destroyed and the hair is not reproduced and the partial baldness referred to is thus brought about.

In the epidermis the parasite works very superficially, but the deep or true skin, though not invaded by the growth, is in an irritable, somewhat inflammatory condition. Further reference will be made to the character of the parasite at the close of the lecture, when you may have an opportunity of studying it under the microscope.

Diagnosis.—The recognition of a typical case of favus, or in other words a case wherein most of the symptoms and characteristics just considered are present, is a matter of no great difficulty, providing we know and are familiar with what those characteristics of favus are. The disease is not always typical, however; for instance, if the patient when first seen has been under treatment or has given the scalp ordinary good care in the way of washing, etc., the crusts may be moderate or even absent, and it would then be very difficult to make a diagnosis from the appearance of the part. In this case, the history given by the patient of the previous character and behavior of the scap, as regards crusting, the color of the crusts, etc., would arouse suspicions of favus. In any event, the use of the microscope would settle the question. The affections presenting the most striking resemblance are eczema, tinea tonsurans or ringworm of the scalp, and psoriasis.

We have the parasitic or contagious origin in favus. In eczema, though many may have it at the same time, it is not propagated from one person to another. We have much greater irritation, more serous exudation and itching in eczema

than in favus. The crusts, though sometimes inclined to be yellow in eczema, never have the bright yellow of favus, but rather a dirty yellow. The crusts in eczema never have the brittle quality that is characteristic of favus; they never have the umbilicated condition. In eczema the disease is not so liable to be continuously confined to the same patch as in favus, but will usually be more generalized and quite probably show an irritated, red, eczematous condition in the face at some time during the career of the disease. The hairs in eczema do not show the brittle, lustreless quality, with a tendency to fall out, that is characteristic of favus. As to the odor of the part, there may be a very offensive odor in eczema under certain conditions, but it is of an entirely different character from that previously referred to as characteristic of favus. When uncertainty exists, or in any event, the diagnosis can always be very readily made by the use of the microscope, to which we will refer at the close of the lecture.

In tinea tonsurans we do not have the yellow crusts, in fact we do not have crusts at all, but scales. The disease spreads centrifugally by peripheral extension, etc.

I have seen psoriasis of the scalp diagnosed as favus. In this disease, though the scales may at times accumulate into a crust-like mass with a dirty yellowish color, there need rarely be much trouble in discriminating one from the other. Even without the microscope the scaly or crusty accumulations of psoriasis never have the sulphur-yellow color, they are never cup-shaped, they are more general, almost always involving various portions of the non-hairy integument. The hair retains its normal lustre, is not brittle, broken off and loose, etc. If psoriasis have lasted for years, it will generally give a history of having been, at some time during its career, entirely well, which is never the case in favus.

Treatment.—The disease being dependent upon a parasitic or fungous growth, it naturally follows that remedies which destroy the growth will cure the disease, providing they be applied so as to reach it; but this is the great and only difficulty in treating favus. The parasitic growth being a very small, microscopical one, it penetrates to the bottom of the hair-follicles and even into the hair structure itself, and is therefore very difficult to reach with the remedy. The class of remedies to be used is that known as parasiticides, or remedies capable of destroying vegetable organisms, and it matters not which of the long list be used, though it is probable that certain combinations penetrate to the deeper parts more readily than others and would therefore be preferable.

It is necessary first, as in treating every other diseased surface, to remove the crusting, which can be very readily accomplished by frequent anointing and washing with soap and hot water. This being accomplished, we know now that if the hairs be removed—which are usually loose in the diseased patch—every place invaded by the growth can readily be reached by the local application. This procedure is undoubtedly not always necessary, but in stubborn, old standing cases, like those before you, it will be found a more satisfactory way of treating the disease. In this way the cure is certain, while to treat without removing the hairs is always tedious and uncertain. Whether epilation be resorted to or not, the remedy must be thoroughly rubbed in day after day for a month or two at a time. It is well then to discontinue for a week or so to see if the crusting be reproduced, and to what extent, and if any disease be found remaining the process must be again repeated in like manner till the crusts cease to reappear.

In these cases we will order that the hair be shingled and that the parts be anointed with some oleaginous preparation —of which there is nothing better than lard—three times a day, and washed with soap and hot water once a day. Then in a few days, as soon as well freed from crusts, we will have the hairs removed. This should be done by the physician or a competent assistant. We will then apply three times a day a solution of ten grains of bichloride of mercury in an ounce of chloroform. This we will continue as previously suggested for a month or so, etc.

Prognosis.—The prognosis in a case treated in this way is always good, providing the treatment be rigidly and carefully persisted in for a sufficient length of time, which may be many months.

Let us now study briefly this vegetable parasite, or fungous growth under the microscope, by which means we are enabled not only to arrive at a positive diagnosis, but to demonstrate what we have said of the pathology of the disease. I now take, as you see, a very small piece of the crust from this patient's head, moisten it on the slide with a little water, put a cover glass over it, and place it under a one-sixth objective. The fungus can now be seen in great abundance. You will now notice first, as you examine the specimen, small round, globular or oblong bodies. You may also see small elongated tubular bodies, some of which are chain-like in appearance, of a similar diameter. The small round bodies which you see in great numbers are what are termed spores; they are not exactly uniform in size, and vary from about $\frac{1}{7000}$ to $\frac{1}{8000}$ of an inch in diameter, showing therefore, as you can see, about one-third to one-half the diameter of a red blood corpuscle as seen under the same

power. The tubular, thread-like elongations you see are termed mycelia, and the chain-like bodies are either spores linked together, or mycelia traversed by transverse septa, which in all probability ultimately divide into spores.

A CASE OF ACTINOMYCOSIS HOMINIS. *By* DR. A. SCHIRMER, Chicago.

[Read before the Chicago Medical Society.]

Frank P., a Pole, 25 years old, married, is at present employed in a lumber yard. He has been a resident of the United States five years. In Poland he was employed as a farm laborer during the summer, and in winter he attended to barn work. There is no history of any hereditary disease in his family.

When 18 years old, while chopping wood, he received a slight incised wound on the chin. The hæmorrhage from it was slight and no attention was paid to the matter. Shortly afterward some swelling was noticed on both sides of the lower jaw. The swelling on the left side disappeared in a few days, but on the right it remained. Three months after the injury he was obliged to consult a physician on account of the severe pain in the injured part. A clear fluid was injected into the swelling several times, in each instance followed by severe pain. Shortly after the injections the skin turned white, and in a few days opened, discharging a little pus. The fistula remained open and later on the discharge increased. Since this time the patient has been unable to completely open his mouth. Three years ago, on account of a severe cough, he was unable to work for one week, but from that time on he was employed until last May.

In July last, I was called to see the patient at his home. He then complained of severe pains in his left side and stiffness of the neck, so that he was unable to move his head. He was feverish, his pulse was frequent and his temperature was elevated. He had no appetite, and he coughed some. Two days later the fistula was enlarged, its walls dissected out, and some pieces of necrosed bone were removed. At the same time an abscess on the left side of neck, midway between the shoulder and the chin, was opened. It discharged about a tablespoonful of sero-pus, in which floated many sand-like grayish-yellow granules. The opening into the abscess was enlarged and a digital examination proved it to be superficial. The patient could open his mouth better after this operation. Ten days later an abscess on the opposite side of the neck was opened; it discharged about two ounces of pus, somewhat thicker than in the former instance. It also contained granules, but smaller in size than those in the first abscess. Since I first saw him the pain, cough and expectoration have become gradually worse. His appetite has failed, and he does not sleep well. During the last ten days he has complained of severe pains in his right arm.

When I first saw the patient I suspected actinomycosis, and preserved the contents of the abscess. Microscopic examination confirmed my diagnosis, which was concurred in by Professor C. Fenger, who also demonstrated the presence of actinomyces in specimens of the abscess-contents sent him. The fungus has also been observed in the sputum of this patient.

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EDITORIAL.

ASEPSIS VERSUS ANTISEPSIS.

The controversy now going on between the advocates of simple "cleanliness" on the one hand, and, on the other, of those who rely upon such antiseptics as corrosive sublimate, carbolic acid and iodoform, continues to grow stronger as time passes. It becomes even acrimonious. Like many other discussions of a similar nature, a proper definition of the terms used, and a comparison of the points of similarity in the two methods, would reveal the fact that both are in harmony with well established biological facts.

Cleanliness is defined by Worcester to be "freedom from dirt." If we turn to "dirt" we find it defined as "filth; mud; mire; anything that renders unclean." It is evident, from even a superficial acquaintance with the discussion, that "cleanliness" is not used in the common acceptation of the term. It is rather difficult to determine in a given case just what kind of "dirt" the reporter thinks is excluded by "cleanliness"; in one case it is germs, bacteria, etc., with their potent and multiplying power; in another, "septic matter"; in a third, "dead matter," in fact any substance, organic or inorganic, may come under this comprehensive term. The great ovariotomist, Lawson Tait, if correctly reported by a correspondent, does not class bacilli as dirt, because he says he would gladly use them as a dressing if they were sufficiently dry and absorbent. It ought to be possible for him to secure some of the *bacillus anthracis* sufficiently desiccated for his purpose. On

the other hand, the antisepticists pin their faith to spray, solutions, and other means of destroying the omnipresent germ. They look upon the first class as men too conservative to ever get a new idea, and accuse them of secretly holding to the "tape-worm diathesis" of the fathers.

An examination of the two methods suggests the secret of the success of each. In the first instance, the germ is excluded, and is analogous to the experiments of Tyndall and Pasteur, in which the former exposed putrescible fluids in chambers, the sides and bottoms of which were coated with glycerine and the contained air had deposited its foreign matter; the latter, who obtained similar conditions in the catacombs of Paris and the summit of the Righi Kulm. In both cases organic matter was exposed to "clean" air without any infection, as has been proved over and over again. Similar conditions might be obtained by having an operating room constructed with only one opening for the ingress of air. By suitable filtering apparatus the air could be deprived of all foreign matter, and that already in the room would in time deposit all its floating matter, which could be retained by a sticky coating applied to the walls and floors. All instruments could be disinfected by heat, and the water used for preparing the operator, the patient, assistants, and for irrigating the wound could be sterilized by discontinuous heating. The principle of "cleanliness" here laid down ought to secure absolute immunity from wound infection. Whether it is practicable in application remains to be seen.

The principal fact thus far brought out in the discussion is that wounds may be exposed to *chemically pure* air and water with impunity. Dirty water and impure air may be rendered innocuous by spray of carbolic acid and corrosive sublimate. The successes by each method are about equal when both are

in competent hands. The latter method is the easier of application. The term "cleanliness" might be dropped and "asepsis" substituted to designate those methods which endeavor to secure absence of germs. "Antisepsis" might be employed in designating those methods which have for their object the destruction of germs supposed to be already in or about a wound. The term "aseptic dressing" might be applied to dressings which are sterilized, and which protect the wound mechanically. The term "antiseptic dressing" might be used to designate dressings which are capable of destroying germs, and which protect both mechanically and chemically.

ACTINOMYCOSIS.

In another column appears the report of a case of this comparatively rare disease in the human subject. The number of cases thus far reported is about thirty-six; the great majority having occurred in Germans of the peasant class. It would seem as if their habits peculiarly exposed them to infection from this fungus. This last case, it will be noted, is a German, and, from the history of the case, seems to have contracted the disease in his native land. A very interesting point in the history is the length of time, seven years, that has elapsed since the primary infection, and the manner in which the fungus gained access to the tissues. Two cases reported during the past year bear directly on this point: the first, by I. Israel (*Central blat. für Med. Wissensch.*), is that of a coachman from Russia, who used the hay-loft of his barn as a bedchamber, and often drank from his horses' bucket. He first complained of a severe pain in the left side, and shortly thereafter an abscess appeared, the pus of which contained a large

number of actinomyces. An examination of the lungs after death revealed a large mass of actinomyces in the anterior inferior portion of upper lobe of the left lung. In the centre of this mass a piece of a tooth was found. Israel advances the hypothesis that lung-actinomycosis is brought about by the aspiration of the infectious material from the mouth, and that sometimes this fungus is developed on the teeth.

The second case, by Professor Soltmann (*Jahrb. für Kinderhkde, 1886*), was a boy who had swallowed an ear of fox-grass ("*tauben Gerste*") which after a few days was discharged in the contents of a small abscess at the angle of the right scapula. Some six months after this accident the boy presented another swelling to the right of the vertebra which contained pus and actinomyces. Soltmann regards this as confirming Ponfick's view that plants may act as the vehicle of infection.

While the history of Dr. Schirmer's case is imperfect, yet in the light of the above facts, the slight wound of the chin may be regarded as the source of infection, which may have occured at the time of its reception or later.

FOREIGN CORRESPONDENCE.

CLINICAL NOTES FROM VIENNA.

To the Editors of the CHICAGO MEDICAL JOURNAL AND EXAMINER.

Gentlemen:

In my last letter to the JOURNAL AND EXAMINER, I promised to give, in the next, some surgical notes, taken at the clinic of Professor Ghiersch, in Leipzig; but the material from which to draw has so increased on my hands, that I have concluded to give notes of a single case only, from that clinic, and to draw also from the lectures of Professor C. Braun. The patient was a woman 68 years old, thin in flesh, but prior to the present attack, four months ago, in tolerably good health.

At that date she began to complain of a burning sensation in her left foot and toes. Soon after, a blue spot appeared on the top of the great toe, which became extremely painful, then turned black. The same process rapidly extended upward until the foot was gangrenous as far as the ankle-joint. Professor Ghiersch gave a short *résumé* of the pathology of this form of gangrene, saying that it was brought on by an atheromatous condition of the blood-vessels, which, as they approached the lower extremities, become smaller and more easily obliterated. The force then required to carry on the circulation being greater, the two combined influences rendered the feet and toes eminently predisposed to this disease. As an application, he used two parts of starch to one of iodoform, sprinkled over the surface, to which he applied cloths wet

in one part of alcohol, two parts of water and (five per cent. of the whole) carbolic acid. He reviewed the line of treatment formerly pursued, that is, to let the parts alone until a perfect line of demarcation was formed by nature. "By that time," he remarked, "your patient will be worn out."

Then, again, the nearer you can get to the centre of the circulation, the more potent will be the heart's action to carry it on; so, in this case, instead of waiting for a line of demarcation between sound and diseased tissues, he amputated at the union of the lower and middle third of the femur.

I was much interested in this old lady's case, and a physician wrote me a month later that the patient had entirely recovered.

June 1, 1886. The first patient presented today was a woman, 47 years old, from whom Professor Braun had removed with the galvano-cautery the entire cervical portion of the womb, four years ago, on account of cancerous infiltration. The patient rapidly improved, and everything went on well until four months ago, when she began to suffer from dysmenorrhœa, and for the last two months her catamenia have failed entirely to appear. Above the *symphysis pubis* a tumor could be felt as large as a small cocoanut. An attempt to introduce a sound into the womb entirely failed. There was no cervix, as that had been cut away. A small depressed point in the centre of the cicatricial tissue showed where the uterine orifice had previously existed, but which was now completely obliterated. A long, narrow bistoury was plunged in at this point as nearly as possible in a line with the axis of the tumor that was to be felt above the pubis. A large quantity of dark grumous blood followed this incision. A sound was now introduced into the womb to a depth of six inches. The opening was enlarged by incisions made antero-posteriorly and later-

ally; the womb was well washed out with a 1 to 1000 solution of thymol; an iodoform suppository was introduced into the uterine cavity; the vaginal vault was sprinkled over with iodoform; the vagina was tamponed with iodoform gauze and the patient was put to bed. Professor Braun remarked, in connection with this case, that all these antiseptic precautions were absolutely necessary, as it was in just this class of cases that we might expect putrid changes to occur in the uterine cavity unless these precautionary measures were faithfully carried out. He then gave a general outline of his very extensive experience in the management of cancer of the womb. His deductions led him to lay down the following general rules:

1st.—That the *total* extirpation of the womb for malignant disease had proved a failure; that if the cancerous infiltration had extended so far that one could not remove it by the removal of the cervix, on account of the great vascularity of the parts and their numerous lymphatic glands, one might be assured that even after extirpation of the entire womb there would still remain behind in its connective tissue the nidus from which would soon spring up new cancerous nodules that would destroy the patient.

2d.—For the removal of the cervical portion of the womb he prefers the galvano-cautery. While it may be followed occasionally by the same accident that befell this patient, viz., a cicatricial closure of the *os uteri*, the disease is less liable to recur when thus operated upon than when the knife is used.

He cited in this connection the history of several patients upon whom he had operated a quarter of a century ago and who were still alive and well. This brought to my mind a lecture I heard him deliver eight years ago, in which he dwelt at length on the difficulties connected with an *early* diagnosis of cancer

of the cervix. He said at that time that he was in the habit of cutting out a piece of the suspected tissue and sending it to a microscopist for his opinion. Not being always satisfied with the diagnoses given, he took to sending specimens to two different men, and often got two opinions; so that he had lost faith even in the infallibility of the microscope, and he believed that there were a large number of cases in which a positive diagnosis was impossible in the *earlier* stages of the disease.

The next patient was a woman who had just entered the hospital and who had miscarried at her own house ten days before, in the third month of pregnancy. Two days after, flooding began and she lost a large amount of blood. She was put in Sims' position, a speculum was introduced, the posterior lip of the womb was caught with Bozeman's forceps and brought well down. A large semi-blunt curette was introduced into the womb and the after-birth scraped away. Professor Braun prefers this mode of operating to the introduction of the finger, as he claims one can operate through a narrower os, and do less violence to the womb. The womb was washed out with thymol, as before described; a suppository of iodoform was placed within the os; the vagina was tamponed with iodoform gauze and the patient was sent to bed. This tampon is usually removed at the end of twenty-four hours, and if the patient has no increase of temperature no other treatment is instituted.

The next patient was one who had been delivered four days before at full term, and the labour was natural. The after-birth followed soon after the child. Twelve hours ago she had a severe chill and her temperature was now 40° C. She was placed in Sims' position; a speculum was introduced; the anterior lip of the womb was caught with a tenaculum, a large blunt curette introduced and a considerable portion of the

chorion curetted away. He dwelt at length upon the proper manner of performing this operation.

The curette is first carried well up to the fundus, and is then withdrawn with one long sweep until it emerges from the external os. In this way one is enabled to determine at what portion of the uterine cavity any abnormal substance may be located, and so know where to direct efforts for its removal. This woman's womb was washed out with a solution of bichloride of mercury, 1 to 4000, followed immediately by the thymol solution, 1 to 1000.

The iodoform suppository was used as before described; the vagina was tamponed with iodoform gauze and the woman sent to her bed. Professor Braun predicted that within eighteen hours this woman's temperature would be normal, and that she would make a good recovery. In speaking of the use of intra-uterine injections in general, after childbirth or miscarriage, Professor Braun said that where he used them as a precautionary measure simply, that is after all operative procedures that involved the introduction of the hand or any instrument into the womb, he washed out the uterine cavity with thymol.

On the other hand, if he has to do with a case where there was a decided increase of temperature, showing that a septic process was already beginning, the thymol was too weak an agent to depend on as a destroyer of the existing germs, he uses first the stronger remedy, 1 to 4000 of the bichloride of mercury, and then follows it with the thymol to wash away the mercury to prevent *its* poisoning the patient. He said: "We have used this treatment in this hospital eighty-four times in the last six months, and while many condemn it altogether, or only use it with great reserve, I only regret that I have not used it earlier and oftener. The only patient we

have lost in this hospital during that time from a puerperal process, I believe, died because we postponed our intra-uterine treatment too long."

"When I look over an experience of thirty years and remember the number of valuable lives I have seen sacrificed to what we jumble together and call *child-bed fever*, and reflect also how worthless most of the remedies for the same have proved in my hands, I am like the drowning man, ready to catch at a straw."

Hence the great interest with which I have studied this subject of their local treatment by means of intra-uterine injections.

Of the men who shall read this article, how do three-fourths treat child-bed processes? Possibly they wash out the vagina themselves or very likely order some old lady to do it. For this purpose an old Davidson syringe is called into use which no process short of its entire destruction could render aseptic. With this a solution of carbolic acid of very indefinite strength is used, generally with the solution a considerable quantity of air is thrown into the genital tract.

But their great agent in these crises is *quinine*. Though such men as Credé, and in fact a majority of the best observers here in Germany, think it of no use, in America we are now suffering from a quinine craze and we use it for everything. Or perhaps, following the directions of Professor Fordyce Barker, they put their patient on large doses of opium and an arterial sedative under the impression that they have as a part of the morbid process either a general or circumscribed peritonitis.

This part of their treatment, though rational enough in its place, can only fulfill one or two indications, viz., to relieve pain and lessen the peristaltic action of the bowels, and thus put the peritoneum at rest.

But in the matter of a more remote cause, where does this peritonitis come from? From a morbid process going out either from the vagina or uterus.

Is it not, then, at least a rational idea, when a patient first begins to manifest symptoms of disease, to treat locally the *centre* from which an endless chain of morbid processes may spread to the remotest parts of the system. It is to the *abuse* of the local treatment of the womb in the child-bearing woman that we probably owe a large part of the opposition to this measure.

Some twelve years ago Professor Winckel and other believers in the germ-theory, as a cause of most morbid processes, conceived the idea that if every woman's womb after confinement were washed out with a disinfecting solution, all puerperal diseases would be prevented. Every woman who bore a child was subjected to this operation. Midwives were instructed in the procedure and *Gebärmutterausspülungen* became the rage.

Experience soon demonstrated the fact that this treatment was being sadly overdone; in fact, that its misuse was worse than its entire omission. The practical question for us to consider is this: Under what circumstances should we use intrauterine injections after child-birth? By a careful examination of the German literature of this subject during the last five years, including experiments made in the management of over 7,000 cases in the obstetrical wards of Professor Breisky, at Prague, the following deductions can be pretty safely depended upon, or at least they are the rules that now guide a majority of the men, who have charge of the different lying-in hospitals of Germany. First, vaginal injections should be used in every case *previous* to the birth of the child if the woman has a decided increase of temperature. After the birth of the child

the *womb* itself should be irrigated. In the "*toucher Curs*" in Carl Braun's wards, where four men examine each patient, vaginal injections are used if the woman be taken in labour within twenty-four hours after the last examination. No uterine injection is used if she has no increase of temperature. Thorough uterine irrigation should be used (one to three quarts of the fluid) in every case where an operative procedure is found necessary, whether that be the introduction of the hand or any instrument into the uterine cavity. It should be used in every case where a considerable increase of temperature occurs, unless such increase can be traced directly and positively to some cause outside of the genital tract.

These injections should be used only with an irrigator, and should be used *promptly;* for after the patient has become contaminated by the transmission of the effete matter to distant parts of body, local treatment will be of no avail. The only case of child-bed fever lost in Carl Braun's wards during the last school year was one in which the injection was too long delayed.

The next point is, how are they to be used?

Dr. Fischel, who reports Professor Breisky's cases, in a long article in the 20th volume of the "*Archiv. für Gynækologie*," says that one of the greatest dangers in the use of an intra-uterine injection is the liability to infect the womb by carrying poisonous matter with the tube from the vagina into the uterine cavity. The first step in the operation, he says, is to thoroughly disinfect the *vagina* by washing it out with a 5 per centum solution of carbolic acid. He lays it down as a fundamental fact that one cannot tell from what point either in the vagina or the womb it is from which the poisonous matters are being absorbed which are producing the mischief.

A few wounds are likely to exist at both points. To protect these wounded surfaces from infection, nature pours out upon their surfaces a layer of plastic lymph, so that effete matters are not easily absorbed; and if this were not the case, a majority of women would die in child-bed. Hence he says that very often a woman is doing well and a vaginal injection is used for cleanliness and at once she is taken with a chill and has a high fever for a time. This is because there has been washed away the dam that has protected her from infection.

It follows therefore that when injections, either vaginal or uterine, are used they must be used with great *thoroughness.* After the vagina is thoroughly washed out, Breisky examines its surface very carefully and touches all denuded points with the tincture of iodine; though Carl Braun does not use this.

The idea is that by this means there is left a surface more healthy as well as less liable to absorb the foul secretions from the womb and vagina.

The author dwells at some length on the subject of permanent irrigation of the vagina and womb, and, after a long trial of the same, has abandoned its use.

I find myself in a field so wide that its full survey is impossible in the space to be occupied in the JOURNAL AND EXAMINER, and I will close with a few words as to the agents best to be used in uterine injections. Braun's ideas on this subject can be gleaned from what I have already written, except that he considers any solution of carbolic acid stronger than two per centum a dangerous remedy if the woman has had a child at full term.

On the other hand, Breisky uses the carbolic acid solution

of five per centum strength. This he uses at first, and after that a solution of chloride of lime.

Under no circumstances is the use of these remedies to be entrusted to a midwife or a nurse.

Glass tubes long and curved are the kind used here to irrigate the womb at full term, as they can be easily disinfected. In the lying-in wards here in Vienna the irrigators are also made of glass. The injections are not warmed but used at the temperature of the room.

Where injections are used in cases of miscarriage, where of course the os is comparatively narrow, Bozeman's or Dr. Breus's intra-uterine syringes are used. If the womb in the latter class of cases needs to be dilated to get away an afterbirth, Braun prefers decidedly the Hegar dilator to the sponge or other forms of tent. The Barnes dilator, he remarked, is a nice thing to keep in your case, but it will always fail you when you want to use it.

Very truly yours,

W. S. CALDWELL.

Vienna, August 11, 1886.

SOCIETY REPORTS.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, August 16, 1886.—E. J. DOERING, M.D., PRESIDENT, in the chair.

PROFESSOR F. E. WAXHAM presented a membranous cast of the trachea and larynx. The specimen presented was removed from a child nine years old. This cast had remained in the larynx and trachea for several months. The patient was brought to him from Minnesota by Dr. McDavitt, of Winona. The history is as follows: The child claims that in April she swallowed a hedge thorn whilst away from home. She was at once taken with suffocation, and twenty-four hours afterwards was operated upon when at the point of death, by Dr. McDavitt, who performed tracheotomy. The child was unable to breathe through the natural passages after the introduction of the tracheotomy-tube, although many attempts were made to remove it. It seemed impossible for the child to get a breath through the natural passages when she was brought to Professor Waxham. Upon laryngoscopic examination the larynx seemed to be closed, but digital examination revealed a very small opening. Into this opening a small sound was passed, and this was followed by one of the smallest sized intubation-tubes, this by a larger one, and finally the largest sized tube was introduced. It could not be passed on account of the tracheotomy-tube, and violent vomiting ensued, when the tube and this cast

were ejected. After the ejection of this membrane a large sized tube was introduced and pressed down into position, as the tracheotomy tube was removed. This gave the child great comfort. She remained comfortable after the introduction of the tube, took several glasses of milk during the afternoon, and in the evening was taken to the train and returned to Minnesota, the intubation-tube remaining in the larynx to be removed by Dr. McDavitt in the course of a few days.

PROFESSOR JOHN B. HAMILTON, of Washington, D. C., read a paper on

THE RADICAL CURE OF INGUINAL HERNIA,

in which he said that the ablest surgeons from the earliest times to our day have given much attention to this subject. Dr. Baxter's tables show that out of 334,321 recruits and substitutes examined by the recruiting officers during the war of the rebellion, more than 17,000 were rejected on account of hernia. The London Truss-Society, during the first twenty-eight years of its existence, issued over 83,000 trusses. Two factories in Philadelphia manufacture and sell from 216,000 to 250,000 per annum.

Celsus was the first surgeon to have definite ideas about the operation for the cure of hernia; he used cauterization and a bandage. Ligature of the sac has been practiced from an early day. Maupas performed gastrorraphy. Lanfranc, in 1296, favored castration. Ambrose Pare was the first to absolutely abandon castration; he used astringents. Freytag was the first to practice dilatation of the rings in strangulated hernia. Nicholas le Quin, of Paris, introduced the truss about the year 1660, but it was not until the middle of the eighteenth century that surgeons began to cut off the gangrenous por-

tion of intestine in cases of strangulated hernia. The galvano-cautery was proposed by Dr. John C. Minor, of New York. Galaud, in 1878, favored the elastic ligature. The practice of scarification is a very ancient one, and has been brought down to recent date with excellent results. Guerin was probably the first to practice subcutaneous scarification. Invagination has for its object the occlusion of the inguinal ring by the fascia, and sometimes by the integuments. The late Dr. George Allen, of Springfield, Illinois, reported fifty cases cured by Gerdy's method. Wood's method not only invaginates the fascia, but draws together the pillars. All of these methods have their greatest successes in small hernias and bubonoceles, and are absolutely valueless in those which are so large that ordinary invagination will not occlude the opening. Dr. Alexander stated, in 1883, that he had performed the radical cure thirty times without any deaths. Wood reports 339 cases without special antiseptic precautions; 96 were cured, 7 died, and 59 failed; in the remainder the result could not be ascertained. Accidents may follow Wood's operation as well as others, such as sloughing, peritonitis, and tetanus. From official reports on file in the Marine Hospital Bureau at Washington, it appears that in Calcutta, India, in 1884, out of a total number of deaths from all causes of 1,293, nearly nine per cent. were due to tetanus. Professor Hamilton favored an operation in all cases affording a reasonable prospect of cure, and thought all cases of bubonocele should be operated upon.

PROFESSOR D. W. GRAHAM said he felt he expressed the sentiments of every member present when he said that it is probably not possible to find in the English language as com-

plete and satisfactory a review of the history of the various operations for the radical cure of hernia as Dr. Hamilton has given us in this paper. Certainly it has been gratifying and instructive to us all to listen to it. Some of the figures which Dr. Hamilton quotes give us an idea of the great prevalence of hernia. He believed reliable statistics show that on an average about every fifteenth or sixteenth individual in civilized communities suffers from some form of it. When we remember this great prevalence, and when we remember that every subject of a hernia sustains thereby a certain amount of disability, and that very many are entirely disabled by it, the subject of the radical cure of hernia assumes an importance not always accorded to it. He thought the author of the paper took a rather highly colored view of the future of these operations. It is not probable that this generation, at least, will be able to use the expressions he thinks surgeons will be using some day in Chicago. However, this degree of success is to be looked forward to and attained if possible. In regard to the modern methods of operating, he understood the distinctive features of Wood's method to be that it is almost entirely subcutaneous, that he uses wire, and that he allows the sac to remain in the canal as a kind of plug. So far as he knew, this method is not practiced in this part of the country to any great extent. In Mr. Wood's hands it seems to be successful in permanently curing a considerable majority of those operated upon, and in decidedly benefiting a good many who are not permanently cured. His statistics show that there is almost no danger to life from the operation itself, at least in his hands. Any method which will give such results, and at the same time involves so little risk to life, must be a good operation.

The open method, the one chiefly practiced in this country,

according to his observation, contemplates strict attention to antiseptic details and the avoidance of suppuration. It involves a little more risk to life from the operation *per se*, but to compensate for this it would seem to give, theoretically at least, a larger percentage of permanent and complete cures. The modifications or varieties consist chiefly in dealing with the sac. Although MacCormac claims that unless the rings are wide there is no advantage in attempting to close them, yet it seems that the best way to treat the sac is to excise a section of the neck between two ligatures, pushing the stump into the abdominal cavity and allowing the body of the sac to remain, unless it is small and loosely adherent, when it may be extirpated. After any of these operations there remains the funnel-like depression on the inner surface of the abdominal wall, which favors a recurrence of the hernia, however efficiently we may have obliterated the sac and closed the rings. MacEwen, of Glasgow, in a recent article describes and advocates a plan he has devised for obliterating the depression. He utilizes the sac by dissecting it from its surrounding attachments, putting a suture through it from side to side beginning at the lower end, thus making a corrugated pad, which he pushes through the internal ring into the cavity, after first separating the peritoneum for a little distance around the ring with the finger. This makes a convexity on the inner surface of the abdominal wall, when there would otherwise be a concavity. This modification appears to be a real improvement, but the practical value of it is as yet largely conjectural. By way of adding something from an historical standpoint, there might be mentioned what was not alluded to in the paper, that electrolysis has been used and advised to set up a plastic inflammation in the inguinal tract. He believed this suggestion came from a Cleveland surgeon, whose name he had forgotten.

This is the same in principle, of course, as the use of subcutaneous injections, and he should think would be preferable to the injections, if he were to judge of it without having tried it.

PROFESSOR MOSES GUNN said: This subject is of intense interest, and we are very much indebted to Dr. Hamilton for the exhaustive review he has given us. We have to consider what are the best methods for operating with the intent of effecting a radical cure. He was inclined to discard all the old invaginating processes. In the first place, the invaginated portion is always liable to subsequent prolapse; in the next place, it is always a foul mess. It won't do to simply remove the cuticle; all the organs of the skin must be destroyed. The skin contains the hair, sweat and sebaceous follicles, and unless they are destroyed they will continue their work, and thus accumulate material for decomposition. In order to make a success you are obliged to do more than destroy the cuticle. You will have to destroy the skin, and that is a very slow process and exceedingly nasty. Therefore he was inclined to repudiate all invaginating processes. He repudiates also all of the subcutaneous processes, for they are blind procedures, and he would not adopt them where an open operation could be as well and even more advantageously and safely resorted to. He believed the best and surest method of trying to effect a radical cure of hernia is the open method. This method should be performed in every case where an operation is made for the relief of a strangulated inguinal hernia. Just as soon as the operator has opened the neck of the sac and restored the prolapsed viscera or viscus, he should close up the wound. He should begin at the topmost portion of the sac, and with a curved needle and catgut take it up and ligate it as near to the internal ring as he can. Then he should drop down about half an inch lower and ligate again,

and so on down through the canal. He should then approximate the pillars at and above the external ring as closely as possible and close the outside tissues. Thus the operation which is made for the relief of the accident should be made an operation for radical cure. It can be done more effectually at that time than at any other.

Again, the physician is called upon to make an operation for a radical cure; the patient comes to him complaining of the truss, which has become ineffectual, the hernia escaping in spite of it, and his life becoming a misery to him, and he asks if something cannot be done to make a radical cure. The answer is, "yes"; but the question is, by what method shall we make it? Choose the open operation, practiced with all antiseptic precautions. Cut down upon the parts, separate and dissect out as well as you can the neck of the sac, the hernia having been reduced; ligate the sac and cut out a portion. Thrust the stump back into the canal and approximate the pillars, closing them tightly and keeping the external ring tightly closed. So much for the method; now for the prospect of success. How much right have we to expect what might justly be called a radical cure? By the term radical, he meant permanent. In what proportion of cases can we expect to have a permanent cure, so that the patient will never have hernia again? What is hernia, and who have it? He thought he could safely say that the typical man never has hernia. When the true type in development has been attained and the abdominal walls closely woven together, they are proof against such accidents and there will be no hernia. Hernia is the result of the imperfect development of the abdominal muscles and aponeuroses. When that imperfect anatomical development obtains in the patient, the abdominal muscles are thin and flabby, and in such cases we get hernia.

Nor can we in such a case by an operation make a man better than his Creator made him, but if we can make him as good as he was we may congratulate ourselves. After we have operated and closed up this weak point as well as possible, the very best result that we can expect is that we have made the man as good as he was before he had hernia; but, if he was weak enough to have hernia from certain exciting causes, he will be weak enough to have it under similar circumstances again. If his hernia is brought on by lifting and straining, the same exciting cause will bring it on again, and under these circumstances a radical cure is only measurably radical. We should tell the patient after operation that if he will be more careful and take no violent exercise, he may hope for exemption from hernia.

In other cases, the patient has an old and immense hernia and cannot wear a truss; we operate upon him and can say to him that if he will be more careful and wear a truss, he can be tolerably comfortable for the rest of his life. Such, he apprehended, is the true aim and scope of operations for the radical cure of hernia; such are the precautions that should be given patients, as they must become our coöperators in order to make this operation a success; and with such coöperation and conscientious efforts on our own part, radical cure of hernia becomes a standard and important operation, as important as the subject itself, which, as we have seen, is of immense importance on account of the great dissemination of the disease.

DOCTOR E. F. WELLS said: Dr. Hamilton has certainly read a very interesting and extensive paper. There is one point in particular mentioned by the author, namely, that he advocates an operation in all suitable cases where an operation is not distinctly indicated. Every practitioner of large ex-

perience must certainly have met with many cases in which the truss had been applied resulting in a cure, and he thought the truss should not be stricken entirely from the methods of obtaining a radical cure of hernia.

PROFESSOR HAMILTON in closing the discussion said he need not say that he was extremely gratified to find such substantial unanimity of sentiment as to the propriety of operation—nay, as to the necessity of operation, but there can be no doubt as to the necessity of further statistics on the subject. In regard to invagination, he thought a reading of the paper would not show that he advocated the method of invagination recommended by Gerdy. In the recent open method there is no invagination. Under the original Wood's method, the subcutaneous fascia only was pushed up under the ring; by the open method we cut down directly on the sac. This open method is really a combination method, because it brings together the pillars and takes care of the sac. Statistics are necessarily unreliable as to the ultimate permanency of the cure of these cases. The best statistics are those shown by the Swedish Hospital, where out of 300 cases a large percentage of recoveries is shown, and if statistics are worth anything in determining the success of a method, we must place some reliance on these. It would be well to have patients come back every year for the purpose of re-examination.

Professor Fenger, if he correctly understood him, speaks of the influence of suppuration in curing these wounds by letting them heal from the bottom, but in the various subcutaneous operations that is exactly what it is intended to avoid. There is no doubt that suppuration will make a radical cure of hernia if the patient's strength lasts, and the suppuration does not extend into the abdominal fascia. That was the method by which the old red-hot irons accomplished their purpose. The

mineral acids produced a radical cure by the destruction of the tissue and healing from the bottom. The seton also performed a cure, but it has so many disadvantages that it is not to be compared with those procedures that stop the inflammatory processes short of the decomposition or death of the exudate. In regard to operating on children, he thought the argument cannot be regarded as sound that we should not operate on them on account of the difficulty of keeping a bandage on, for surely if any cases are to be benefited by an operation for radical cure, they are those in which the patient is young enough to grow—in which the tissues can be brought together and retained with great hope of a permanent cure. Everybody knows that cases do recover by the use of the truss, but the proportion, he believed, is less than by any other method. As stated by Professor Gunn, it is found that a majority of operations for strangulated hernia are, in effect, really operations for the radical cure, and there are more than five cures from operations to one after application of the truss. And when we remember that there are 250,000 trusses manufactured per annum in Philadelphia alone, he doubts very much if it can be shown that trusses have even a fair percentage of recoveries following their use.

PROFESSOR WM. T. BELFIELD reported a case of

SUPRA-PUBIC CYSTOTOMY WITH EXTRACTION OF LARGE CALCULI, AND CORROSIVE SUBLIMATE POISONING.

The patient was a feeble, emaciated man, 71 years old, who for nine years had suffered from cystitis of steadily increasing severity, caused, as was supposed by his various physicians, by prostatic enlargement. He had been sounded for stone a year ago under chloroform, but with negative result. For two years he had been unable to empty the bladder except by catheter. He refused permission to introduce the sound be-

cause convinced that he had no stone, but was anxious to have an operation for the removal of the prostatic enlargement.

June 7, supra-pubic cystotomy was undertaken for the purpose of removing by galvano-cautery that portion of the prostate which was assumed to project into the bladder. The introduction of the sound under ether revealed a large stone; the usual incision was made; the finger in the bladder found two calculi, one behind the prostate, the other adhering to the fundus of the bladder, each about as large as a walnut. The first stone was crushed and the second with much difficulty removed entire. The patient was so collapsed that no attempt was made to remove the prostatic outgrowth, which could have been accomplished without much difficulty, and the following day the temperature was 100.5° F., the highest observed. On the third day it was normal and so remained. The wound was irrigated once daily with a bichloride of mercury solution. The progress was entirely favorable until the eleventh day, when there began a severe diarrhœa with much rectal pain and tenesmus, and later the evacuations were tinged with blood and the patient complained of a metallic taste. Sublimate poisoning was recognized and the solution discontinued. Temporary improvement followed, but death ultimately resulted on the thirty-sixth day after operation. No autopsy was permitted, but a hasty examination of the abdominal contents was made. Peritoneum, kidneys and bladder were normal, except that the latter was much hypertrophied. The intestines could not be opened; the calculi weighed 2 ounces and 6 drachms.

THE DEATH OF PROFESSOR F. H. HAMILTON.

PROFESSOR TRUMAN W. MILLER offered the following resolution, which was adopted:

"WHEREAS, This Society has learned with deep regret of the death of Dr. Frank Hastings Hamilton, of New York, and

"WHEREAS, In his death, the United States has lost one of its most distinguished surgeons; one of its ablest teachers; one of the purest patriots, and, in his private life, one of the most amiable of men; therefore, be it

"*Resolved* by this Society, That we hereby give public testimony to the many virtues of the deceased, and that we tender to his family the assurance of the profound sympathy of this Society with them in the hour of their affliction; that a copy of these resolutions be furnished them, and that a copy be spread upon the records."

CHICAGO MEDICAL SOCIETY.

Stated Meeting, September 6, 1886.—E. J. DOERING, M. D., President, in the chair.

PROFESSOR J. S. JEWELL gave a partial verbal abstract of his paper on

OVERFILLING AND DILATATION OF THE COLON.

He said that for the last ten years this subject had attracted more or less of his attention. During the last eight or ten years he had accumulated a list of over five hundred carefully studied cases, in which the condition named existed and concerning which he gave his observations. His mode of investigating the cases in which the overfilling existed

has been as follows: The patient is stripped so that the abdomen is bare, the abdominal walls being relaxed. Then he takes a plate of soft rubber at least two inches in length by an inch and a half in breadth and one quarter inch in thickness, and a heavy steel hammer, quite as heavy as the ordinary surgical bone hammer. With this the abdomen is carefully percussed over the track of the colon, from its origin, tracing it up under the liver, across and down to the sigmoid flexure. Thus percussing over the track of the colon, and carefully locating every mass of fæces, even in persons with fleshy abdominal walls, he has been able to get at its course and contents. Out of these five hundred cases, perhaps a hundred have said that they were as "regular as clockwork" in having movements from their bowels. But upon examination, in most of such cases the colon was found to have variable quantities of fæcal material lying in it. The part of the colon most subject to dilatation is the sigmoid flexure and the descending colon. At the flexure of the colon, deep in the left hypochondriac region, almost as frequent as in any other part of the course of the colon, he had found it dilated and filled with fæcal matter. The next most common situation is the transverse colon, last of all the cæcum. In one case where the colon was very largely dilated, during the thirty or forty hours that were devoted to emptying it, not continuously but at different times, two gallons or more of fæces were removed. The usual condition is to find masses of fæces lying in lumps here and there, but not filling the entire intestine.

In one case a mass was removed from the right extremity of the colon by massage, and flooding the colon its entire length with water. The fact that this mass had remained

in the colon for more than nine months was ascertained in this way: The patient had taken a dish of dewberries, such as appear in the fall after the ordinary blackberry has passed its season. He was in ill health, and growing worse during his visit he returned home. This was in September. Professor Jewell saw him early in June following. When the mass was removed it was found to be more or less filled with the seeds of the dewberry, and according to his own account he had not taken berries of any kind since the September previous, certainly no dewberries. This mass was about the consistence of soft putty and the size of a large Irish potato.

In most of the cases investigated the colon was dilated apparently, in some part or other, all the way from two to three times its proper calibre. This class of patients are all liable to become "bilious," and are habitually taking cathartic pills, mineral waters, etc. In all or nearly all instances Professor Jewell could trace their "biliousness" to gradual filling up of the colon, and the disturbance produced from this cause in the digestive apparatus higher up. The change in the secretions of the mouth, the bad breath, the unhealthy odor of the skin produced by absorption of fœtid substances from the rotting masses in the intestine, together with the coloring matter in the same, gives the skin of the patient a peculiar, dirty, sallow color. One of the first things to occur in addition to the dilatation, and weakening of the muscular coat of the colon by accumulation of material in it, is irritation of portions of the mucous membranes where the fœcal masses lie, producing local catarrhs. This occurs with a frequency and to an extent that no one would suspect unless the patient or the nurse should carefully watch the

stool. The next important factor in these cases is irritation of the peripheral ends of the sensory nerves of the intestinal mucous membrane, irritated by contact with the fœcal masses. The nerves that return from the colon probably enter the spinal cord at a level not lower than that of the tenth or eleventh dorsal vertebra. Above the level named they probably enter the cord at various points higher up in the lower two-thirds of the dorsal cord, not to mention direct medulla connections, etc. Along these nerves are propagated the irritative impressions from the colon into the spinal cord or medulla, and thereby "switch" connections outgoing or reflex impulses are sent to other portions of the body, producing thus various forms of disorder to be referred to later. He believes that he has not found one case out of twenty of ordinary melancholia that has not had its origin partly or in some cases apparently entirely in overfilling of the colon. Headache and a great many transient disorders referred to the head more frequently owe their origin to this source than he had ever supposed. Next is the influence upon the circulation in general, especially upon the heart's action, lowering its tension, and thus giving a feeble pulse.

Dilatation of the colon often causes a sluggish capillary circulation, and this accounts for the frequency with which patients complain of cold extremities. Professor Jewell has found patients who could not remember having had naturally warm feet for years, when upon removal of the masses in the colon the feet would become warm. In insomnia he has found the condition of the colon described to be a frequent cause, the colon being the seat of the original disorder. There is lowering of the vascular tension nearly always in these cases, hence the feeble nutrition and feeble circulation in the

brain, not to mention other parts. The next most important result of dilatation and overfilling of the colon is the fact that these masses of retained fæcal substance in various ways poison the individual by absorption of septic material. He has had three cases of epilepsy that he traced exclusively, as far as could be told by the results of treatment afterwards, to disease in the left extremity of the colon caused by fæcal accumulations, and when the disorder was removed by proper means he was able to relieve the epilepsy. For the removal of these masses, as a rule, he does not use purgatives, but injections are given after the following plan: A large bag fountain syringe, holding half a gallon, is adjusted at a convenient height from the floor, the patient lying down in the knee-chest position. The fluid should flow with considerable force until it makes its way past the upper sphincter which is at the lower part of the sigmoid flexure; pass one quart to one-half gallon of water; according to the size of the colon, so as to fill the entire organ to the cæcum. In some instances he has been able to introduce as much as a gallon of water into the colon, the patient feeling no serious inconvenience from it, and a half gallon is a common amount to introduce. The patient is then directed to lie down on the left side, and by proper massage over the ascending colon the liquid is moved and with it the contents of the bowel toward the rectum. This should be done once or twice in the twenty-four hours until the colon is clear, and by this means it should be kept so. After this has been accomplished give the patient something that will act as a stimulant to the nervo-muscular coat of the colon. A good prescription for this purpose he has found to be, either in pill or capsule form, extract of cascara, a little belladonna, strychnia, hydrastis canadensis and aloes. By care the colon can be kept clear, and the disorders of the stomach

usually disappear, the secretions of the mouth are improved, the skin becomes of a healthier color and loses the distinctly fæcal odor that it frequently has.

He has met with a number of cases of so-called typho-malarial fever in their earlier stage with a temperature as high at times as 103–4–5, in which, by removing a great mass of material undergoing rapid fermentative decomposition at the high heat of the body, leading to rapid distension of the colon with gas, the signs of disease abated in a few hours and rapid recovery occurred. Where there is considerable inflammation in the bowel itself he introduces water pretty well charged with listerine or some other antiseptic, and a little glycerine or other medicinal agents, and in this way the intestine is purified and cleansed and the individual immediately improved. It seems now astonishing that it never occurred to him earlier, that to have a mass of fæces undergoing fermentation and decomposition in the interior of the body, and in contact with an absorbent surface like that of the mucous membrane of the colon is, or often may be, the real cause of serious diseases.

PROFESSOR H. A. JOHNSON in opening the discussion said: This is a subject to which he had given no special attention, but perhaps if he should propose one or two questions they might elicit some information. First, the inquiry suggests itself as to why this state of things exists, what is the cause of it? Perhaps as the author has suggested, our rapid mode of eating, and our neglect of the natural demands of the functions of digestion have something to do with it, but this does not seem to cover it all. Secondly, the question arises as to how far such a state of things as he describes does actually exist in the colon, viz., putrefaction of the contents. So far as his observation goes, the contents of the cavities of the body,

including the alimentary canal and bladder, are kept from undergoing these putrefactive changes while they are inclosed. It is true that the fæcal matters are full of bacteria in various forms, but he is not sure that the ordinary processes that take place out of the body, go on here. Thirdly, as to the function of the colon; it is both an excretory and secretory organ, and nutritive matter that is carried into it is undoubtedly taken up in its passage through it. There should be a delay, a normal arrest of the progress of the fæcal mass from the time it enters the colon at the cæcum till its discharge. In the normal condition the fæcal mass is made up of the debris, of the waste matters of food, and the material removed from the blood; there ought to be, physiologically, a retardation—time for the accomplishment of these two functions. What is that time?

DR. WM. E. CLARK said: The subject is one of great importance, and one to which he had given much thought. His first call in consultation, after his return to the city some twenty years ago, was to a female patient who had been an invalid for a number of years. A tumor could be felt through the abdominal walls, supposed by the attending physician to be a tubercular enlargement of the mesenteric glands, but which proved to be a mass of fæcal matter in the colon. It had probably been accumulating for a long time, as after removal it was found largely to consist of bran from Graham bread—her principal diet for several years previous. Under appropriate treatment, with particular attention to the condition of her bowels, the patient apparently recovered her health, though she died some years after with disease of the kidneys—the latter perhaps having some relation to the previous condition of the bowels.

He had just made an examination of a supposed uterine tumor, and found a tumor but not connected with the uterus

—but an accumulation of fæcal matter in the colon, and consequently made arrangements for its evacuation. For the removal of these masses of fæcal matter, he first gave cathartic with large doses of olive oil and then used injections of water into the bowel as far up as possible through a stomach-tube; sometimes resorting to the placental forceps for the removal of large fragments.

PROFESSOR G. C. PAOLI said: He had listened with a great deal of interest to the report of Professor Jewell. We know that expansion of the colon occurs in many different diseases, and there is hardly a practitioner who has not seen it in his practice for years. We see it in typhoid fever, nephritis, hysteria and lead-colic. Constipation is undoubtedly a great cause of expansion of the colon. A man gets constipated, neglects himself, his fæces become very hard, and in consequence pains occur in the colon. With due respect to the author's experience and observation, he must admit that although we meet with cases in our practice they are not so common that we see them in the hospital. In regard to the treatment, we ought to administer such remedies as will give tonicity to the muscular coat of the bowels, such as cascara sagrada in combination with small doses of aloes. But without physical exercise medicine has very little beneficial effect. He has seen a shower bath over the abdomen have a good effect in producing contraction and tonicity of the muscular coat of the bowels. In regard to the injection which the author advises, it is well to remark that the rectum should first have a digital examination, because often hard excrement is impacted in it and under such circumstances the injection would meet with an obstacle. Strychnia may be very good in chronic but not in acute cases.

PROFESSOR JEWELL, in closing the discussion, said: The members of the society will of course understand that he had spoken only of the sick people who had come to him, a special class that is not met with so frequently in general practice. He was speaking entirely within bounds when he said that the number of cases that he now has on record in which over-filling of the colon was one of the principal features of disorder, must be 700 or 800 during the last ten years, and 500 of these have been made the basis of his study. The question as to how long the matter may be left in the large intestine without harm is an exceedingly interesting one, and he has made that a study. The difference between the ordinary slow decomposition of fæcal matter in the intestine and unhealthy decomposition has been taken into account in that study, as well as the conditions or causes that bring about unhealthy decomposition. He is convinced that not enough stress is laid upon this subject. Many persons in the condition referred to have been all but ruined by taking by the week, month and year, cathartics, which must be taken into the stomach first, dissolved and go the entire length of the small intestine before they reach the colon. The colon may be emptied in a much more satisfactory way by means of large injections, together with the use of medicinal agents, to stimulate naturally its weakened muscular apparatus.

DR. A. SCHIRMER reported a case of

ACTINOMYCOSIS HOMINIS,

with exhibition of patient and specimens of actinomyces. The paper is given in full in another part of the JOURNAL AND EXAMINER.

DR. NEWKIRK asked if the patient knew of any disease among the cattle he attended.

DR. SCHIRMER: He said there was no disease among the cattle, and nobody else had such a disease.

PROFESSOR W. T. BELFIELD said: The case is hardly one for discussion, because Dr. Schirmer has not said anything about actinomycoses as such, but merely about the case. The finding of actinomyces in the sputum is very interesting; it is undoubtedly a case of actinomycosis of the lungs and must prove fatal. There are only some thirty cases recorded in which this parasite has been found in men. He said he was not familiar with the literature on the subject for the last year, but up to that time there had been no well authenticated case of actinomycosis observed in man either in England or America.

DR. A. V. PARK read a paper on a case of

CARIES OF THE RIGHT PARIETAL BONE CAUSED BY RAILWAY INJURY,

which will appear in the next number of the JOURNAL AND EXAMINER.

CHICAGO GYNÆCOLOGICAL SOCIETY.

Regular Meeting, Friday, July 16, 1886.—The VICE-PRESIDENT, HENRY T. BYFORD, M. D., in the chair.

I.—WAXHAM. *Discussion of paper on "Occlusion of the Os Uteri as an Impediment to Labour, with a Report of Two Cases."*

II.—BYFORD. *Discussion of paper entitled, "A Study of the Causes and Treatment of Pelvic Hæmatocele."*

I.—DISCUSSION OF PROFESSOR F. E. WAXHAM'S PAPER ON OCCLUSION OF THE OS UTERI AS AN IMPEDIMENT TO LABOUR; WITH A REPORT OF TWO CASES.

[Read at the May meeting.]

PROFESSOR W. W. JAGGARD said: From the very clear description of Dr. Waxham's case, I infer the condition was that described by Nägele under the term *conglutinatio orificii*, an uncommon complication of labour, but seldom indicating incision. Usually pressure of the finger is sufficient to open the os.

A more serious condition is that described by Schmitt, under the term *conglutinatio organica.* The cervical canal is obliterated to a variable extent. I had a case, illustrating this condition, under my observation in Professor Spaeth's wards during the winter of 1882. The lower half of the cervical canal was obliterated. Radial incisions were made around the *os externum*, and the canal was dilated with the index finger. Forceps were subsequently applied. The case was reported in the *Medical News.*

DR. JOHN BARTLETT said: I have nothing of interest to offer directly pertinent to the present discussion; but I have rather recently attended a case which I deem so nearly akin to those reported by Dr. Waxham as to justify me in mentioning it.

Mrs. Anderson, thirty-seven years old, came under my notice about three years ago. Five years since, she felt a burning pain in the nose and about the womb. At the same time her menstruation increased in quantity until in the course of a year it became profuse. Because of these difficulties, she sought relief from a quack. For the purpose of removing a cancer, which this pretender diagnosticated, a most violent caustic was put into the nostrils and applied to the womb. One year afterwards the tissues injured by the corrosive had healed; a violent uterine pain remained, and the flow had again become excessive. She applied to Dr. A. R. Jackson, who made an operation for the relief of the *atresia vaginæ* which he found existing. Although the operation was thorough, contraction recurred; so that when she was admitted into the Woman's Hospital in 1883, her condition was probably about the same as it was prior to Dr. Jackson's treatment. Dr. Mary H. Thompson operated upon the patient, opening thoroughly to the *os uteri*. Contractions, however, very soon reformed in the vagina; in October, 1885, her condition was serious. Her pulse was weak and frequent; neuralgic pains about the pelvis were nearly constant, and superadded to these older symptoms were those suggesting pregnancy. The uterus was enlarged and menstruation had ceased for three months. Of her condition at that time, Dr. Thompson writes: "The vagina was closed more perfectly than before. Not an opening could be seen in the occluding disc, which was only one inch from the *ostium vaginæ*. By examination through the rectum, it was ascertained that the uterus was enlarged, especially toward one side of the body." The distress of the patient, the apparently complete closure of the vagina, the non-appearance of the menses and the peculiar enlargement of the womb suggested either retained menstrual blood or some form of

pregnancy. After a consultation, Dr. Thompson proceeded to open up the canal—at the time supposed to be perfectly occluded—between the uterus and vaginal *cul-de-sac*. In reality, a very small opening still existed; this was enlarged carefully by incision and distension until the *os uteri* was thought to be easily in communication with the remains of the vagina.

One month after the operation I was called upon to visit the patient. On the preceding night at a certain hour, most violent pains, as those of child-bearing, had come on, and had continued despite of anodynes, for some five hours. The pains had now, at the same hour as the night before, returned with increased violence. Not to go into details, I will say that the symptoms pointed strongly to some form of pregnancy. In view of the serious character of the case, I called in consultation on the next day, Dr. R. G. Bogue. We left the patient still in doubt as to her true condition. During the following night, I was again summoned; the exact resemblance of the pains to those of labor, and the now recognized hardening of the swelling above the pubes during these pains, made it quite certain that pregnancy existed, and that the contractions would finally lead to the extrusion of the fœtus from its sac *per vias naturales*, or otherwise. Upon careful examination, the vagina was found to be shut off about one inch from the *ostium* by a hard, firm and thick disc of cicatricial tissue. Toward one circumference the small opening detected and enlarged by Dr. Thompson a month before was recognized. By rectal examination, what seemed to be the *cervix uteri* was reached, three quarters of an inch beyond the upper face of the cicatricial disc. Connecting the disc and cervix was apparently a tube of tissue much smaller in circumference and thinner than proper vaginal walls. The pains continuing with

regularity, Dr. Bogue and myself concluded to assist delivery. Slight incisions by means of the bistoury were made in the circumference of the opening in the cicatricial disc, a metallic dilator was then introduced, and when some dilatation had been effected, a modified Barnes's dilator of very small size was inserted. Within an hour, by the occasional use of the knife, and the continual tension of dilators, the disc opening admitted for a little distance the end of the finger into the remnant of the vaginal tube, above the disc. By the point of the finger pressed firmly onward, could now be recognized a hard body which was taken for the *cervix uteri.* With a little more dilatation of the disc opening, it was perceived that the hard body was the fœtus, and that the *os uteri* was healthy and dilating in a normal manner, the membranes being unruptured. As soon as the opposing disc opening was expanded to a size presumed to be sufficient to permit of the passage of the head, the membranes were ruptured. It was then discovered that the shoulder presented; by aid of suitable instruments the child was turned and in the somewhat too vigorous efforts at delivery the body parted from the head, the latter remaining *in utero.* This accident in such a case, with an extra, entirely rigid *os* precluding free procedure through the *os uteri*, ordinarily would be regarded as unfortunate. I looked upon it as a favorable step toward delivery, confident that by means of a suitable vectis the head could be easily scooped through both of the opposing *ora.* In fact, the head was readily so delivered, and the placenta falling over the *os uteri* was removed with the same instrument. One of the symptoms that confused the diagnosis on the first day of the appearance of labour pains was the unusually large, rapidly attained size of the suprapubic tumor. This symptom was now explained, for an examination to determine if the patient was entirely "cleared,"

revealed the presence of a second fœtus presenting by the head. The vectis was applied and the fœtus at once withdrawn, as was also in like manner the second placenta.

The labour revealed the true anatomy of the injured parts. The patient desired that the passage through the disc should be kept open, but inasmuch as the *os uteri* was almost immediately behind it, it was deemed useless and harmful to make the attempt. Within three months the dilated opening in the disc had contracted to a size but little greater than that observed before the miscarriage.

PROFESSOR F. E. WAXHAM said: I would simply allude to the great resemblance in the case coming under my care, between the uterine tissue and the fœtal membranes, especially in those cases in which there is but a small amount of amniotic fluid, and I can see how very easy it would be to do permanent injury to the mother by rupturing the uterine tissue by a pencil or some other sharp-pointed instrument, when, perhaps, by more extended and careful examination, it would be found that simple dilation would be sufficient. In the case reported, the knowledge that the amniotic fluid had been escaping for several hours was sufficient evidence to me that there was an *os*, and it was also proof that the tissues presenting were not membranes, but the uterine tissue. But the great trouble was to discover the *os*, and I assure you it was difficult indeed. The *os* was present in the center of the presenting mass, and yet we could not discover it. It was impossible for me to do so, and it was only after a continued, careful and searching examination that Dr. Nelson was enabled to detect the very slight dimple which was present.

II.—DISCUSSION OF DR. HENRY T. BYFORD'S PAPER, ENTITLED "A STUDY OF THE CAUSE AND TREATMENT OF PELVIC HÆMATOCELES."

[Read at the June meeting.]

PROFESSOR T. D. FITCH said: I have had very limited experience with operative procedure in this class of cases. As a rule, I feel like praising the bridge that has carried me safely over. My usual treatment has been the expectant plan, or trusting to resorption of the clot. Resorption occurs in other tissues of the body, the leg or arm, where you would not think of opening the cavity and turning out the clot. It would be a very bad principle in surgery, I think. My experience has not been sufficient to condemn the operation entirely, but I feel like trusting to the safer plan of the expectant treatment. I have never operated in more than two or three cases, and would not have operated in them had not there been a mistake in diagnosis. One of these cases was a lady at Jefferson, who gave a history of cellulitis. There was softening and fluctuation in the tumor presenting. I was called in consultation by the attending physician. The symptoms were those of cellulitis, resulting in abscess. The aspirator was used and a very small amount of pus was drawn off, and then a larger amount of disintegrated blood. All was drawn off that could be, and the woman recovered, no bad results following the aspiration. No drainage was instituted, and no scooping out of the blood clot was performed; there was no special treatment except on general principles, and the vaginal injections of antiseptic fluids. The opening was not enlarged, the sac was not injected, nor washed out. The opening made by the aspirator needle probably closed up so that no air was admitted, and no decomposition or blood-poisoning occurred.

Another case was one in which I assisted in an operation

for supposed extra-uterine pregnancy. Two distinguished Fellows of this Society were present and concurred in the diagnosis. It was decided to open the tumor through the vagina with the galvano-cautery knife, and when this was opened, there poured out of it a gelatinous fluid, as white, and as clear and pure as could be; it looked to me very much like soft boiled rice. It was a clear white, and perfectly inodorous. The sac was washed out with antiseptic fluids, and the patient treated on general principles; I think no drainage was used. The sac was not scooped out; nothing was turned out except the tablespoonful or two of gelatinous fluid of which I spoke.

Another case I might mention, in which the attending physician and myself (I was called in consultation) diagnosticated an abscess; opened it with the aspirator, and found that it was an hæmatocele. I believe the expectant plan of treatment is preferable to operative interference. I think a larger percentage of cases would recover under this treatment.

PROFESSOR JOHN BARTLETT said: I will take occasion to refer to a fatal accident that once came under my observation, which tends to show the necessity for the greatest care in opening cavities, *per vaginam*, whether resulting from hæmatocele or cellulitis. A patient was greatly reduced by long continued pelvic abscesses. It seemed to be one of those cases in which an operator is called upon to make a determined attempt to reach evacuate and curette a chain of abscesses found to exist within the pelvis. Several collections of matter were opened, and it was supposed that the object of the operative procedure had been happily accomplished. The final washing of the cavity with carbolized water was in progress, when suddenly the patient fell into a

profound collapse; respiration ceasing and pulsation at the wrist failing. This condition was regarded as an accident from ether. Every effort at restoration was unavailing till a Faradic current was passed through the phrenic nerves at proper respiratory intervals. The patient then gradually rallied, and the danger was thought to have ceased. On the following morning the carbolized injection was repeated by an assistant; a fatal collapse immediately ensued. Post-mortem examination revealed a small opening through the roof of the pelvis, and the presence in the peritoneal cavity of the injected fluid. If the Society will pardon a digression, before closing I will take occasion to refer to a symptom of hæmatocele, which would seem to be as rare as it is suggestive. In one case, associated with this condition, I observed the whole surface of the abdomen below the navel, to present an ecchymotic appearance as from the extravasation of blood after an injury. The patient was alarmed at the "black and blue" appearance, regarding it as a sign of "mortification." It existed for weeks and disappeared, *pari passu*, with the pelvic extravasation.

PROFESSOR W. W. JAGGARD thought the ruptured cyst of extra-uterine pregnancy a more frequent cause of retro-uterine hæmatocele than the text-books would lead one to believe. Gallard has emphasized the importance of the operation of this etiological factor. He * makes a statement to the effect that independently of traumatism, almost all hæmatoceles are caused by the ruptured cyst of extra-uterine pregnancy. Such a broad statement naturally provoked salutary criticism. More recently, Veit †, of Berlin, has collected 146

* Leçons Cliniques des Maladies des Femmes. Paris, 1873. P. 635.

† Die Eileiterschwangerschaft. Stuttgart, 1884. P. 14.

cases of hæmatocele, of which forty cases, or 28 per centum, were probably due to the ruptured cyst of ectopic gestation. Veit's estimate does not appear extravagant.

He would like to inquire of the author of the paper, what was the indication in the case reported for operative interference? The indication had probably been stated, but through inattention he did not remember it. A small non-suppurating, retro-uterine hæmatocele of six months' standing was not, *per se*, an indication for any operative interference.

Any discussion of the surgical treatment of retro-uterine hæmatoceles, would be incomplete without some mention of Dr. A. Martin's plan of treatment in cases of extra-peritoneal hæmatoma. Laparotomy is performed, eventration of the intestines effected, the sac incised, evacuated and curetted, and subsequently united by sutures, drainage is maintained *per vaginam*. In Martin's hands, this operation has been perfectly successful in six cases.

PROFESSOR C. T. PARKES said: I do not think I have anything new to offer on the question of treatment of hæmatocele. My experience embraces only three cases. The first was a lady whom Dr. Fitch saw with me about a week after the initial symptoms, which present themselves in these troubles, had appeared, and we concluded to make an opening through the *cul-de-sac* of Douglas. I used the Paquelin cautery for the purpose of opening up the mass, which was not very extensive. The principal symptom which led us to think it was necessary to resort to interference, was the evidence of the presence of probable suppuration. The lady had been having slight chills and some corresponding rise of temperature, and we thought it best to be certain whether or no the mass had

decomposed and broken down, so we opened it with the cautery, and quite a quantity of grumous, broken down blood, with clots came out. The lady was relieved of her pain and distress. We introduced a drainage tube, and through this tube passed a large catheter as long as the opening would permit, and washed out the cavity every day and followed it up for a long while, with a diminution in the size of the mass, until it got so that it was merely perceptible above the pubes, then the chills came on again more severely, and after suffering for a month or six weeks she finally died of septicæmia. In that case I was satisfied from the fact of being able to fill the cavity apparently, under the force of hydrostatic pressure, and then have something give way, and the fluid rapidly disappear, that we had a series of cavities which were opening into each other. I think if I had such a case to manage now I should do differently. I should use thorough antiseptic precautions, and care at present; such treatment was not then deemed necessary. The next case, a very interesting one, happened last winter; I saw the lady four or five weeks after she was taken ill. She was taken as though she were going to have a miscarriage after having missed menstruation twice, and when I saw her she was in an extreme condition of collapse; upon examining the abdomen, it was found full of something, dull on percussion, resonant above, and to the sides; on digital examination the ordinary signs of hæmatocele were present. This woman was in such a weak condition that I could not bring myself to the idea of interfering, and tried to support her and wait for events. I attended her two weeks, while she varied from one condition to another, all the time life hanging by a thread. In the third week, on examining her abdomen, I thought I detected fluctuation, and in

two or three days was certain of it. I aspirated in the *linea alba* midway between umbilicus and pubes, and at first withdrew a quart of blood, but, although I was satisfied there was more there, I did not repeat the aspiration that day. Two days afterwards I aspirated again, and withdrew two quarts. She began to improve from that moment; I merely put her on tonics and supporting treatment; this was in February. I saw her about a month ago, and she was going about the house the same as anyone else. The third case was a little later in the same year, a lady who had been bleeding a little for some time, with the presence of signs of conception of two months' date. I made an examination, and was satisfied that I detected to the right of the uterus a mass as large as one's fist, easily reached by manipulation internally and externally, tense to the touch, and elastic. I diagnosed a probable hæmatocele, kept her quietly in bed, but did nothing special for her. The occurrence of this tumor was accompanied by extreme shock, prostration, pallor of the body and symptoms of collapse. She has now entirely recovered without any interference whatever. That last case led me to think of some of the reports I have read about surgeons being called to see a patient in collapse, finding she has flowed a little, with a history of probable pregnancy, making an examination, and discovering a little tumor, diagnosing extra-uterine pregnancy, using electricity and curing the patient. It seems to me there may be a possibility of there being a mistake in some of these cases of extra-uterine pregnancy that are cured so readily by the use of electricity. They are becoming very frequent. I must say, that it was a very difficult matter for me to decide in this case, whether it was extra-uterine fœtation or hæmatocele; still I am satisfied that it was an hæmatocele.

DR. H. T. BYFORD said: Before closing the discussion, I would like to add the following case to the series reported in the paper.

CASE VI.—Mary H., a German servant girl, 25 years old, was taken sick with pains about the lower abdomen, nine months ago. The attack, which came on after a menstrual period, kept her in bed little of the time, but did not pass off. In six weeks, her menses came on and lasted two weeks. The bleeding ceased for a few days, then returned and had continued, in varying quantity, until stopped by ergot about a week before I saw her. Vesical irritation was an almost constant symptom. Up to that time she had tried to attend to her work, but then gave up her place. She told me, a little over a month ago, when I first saw her, that she had felt worse since taking the medicine. The great pelvic tenderness subsided rapidly under the "absolute rest" treatment, and in less than a week afterwards, I was able, without paining her, to completely circumdigitate a large boggy or semi-elastic tumor in the right broad ligament, extending behind the uterus from a level with the internal *os* upwards, and reaching into the left broad ligament, where it felt harder and nodulated. The uterus was antiflexed, displaced anteriorly, and to the left, (leaving only room enough between the cervix and the pubes for the index finger), and intimately attached to the surrounding mass. The probe entered three inches, turning forwards. After keeping off her feet, although not in bed, using hot douches, iodine applications to the abdomen, iron internally, and having glycerine plugs applied about every three days for three weeks, the tumor had become harder, somewhat nodulated in places, and perceptibly smaller. She had felt quite well again until the last few days, when she undertook to resume her domestic duties.

This case shows well the positive benefit of rest, and the positive harm that is sure to result from want of it. Its history is similar to the history of many such tumors which go on to suppuration, but which, with proper treatment, would have been promptly absorbed.

The unfortunate case related by Dr. Bartlett bears witness to the dangers of the curette in pelvic hæmatoceles, and is probably one among many somewhat similar ones that have not been reported. The necessity of a large opening, perfect drainage and great antiseptic precaution is vividly shown by one of the cases recited by Dr. Parkes. His view as to the liability to the formation of pus pockets is corroborated by the sudden discharge of half an ounce or more of pus on March 26, in the case of Mary H——, followed by the rapid sinking of the uterus back into a natural position. This pus pocket, had the operation *not* been performed, would probably have formed and pointed upwards in the direction of the least resistance, and would have become an abdominal abscess, and a serious thing to manage. I quite agree with Dr. Parkes that simple hæmatoma and hæmatocele are too often thought to result from extra-uterine pregnancy, and think it is partly the result of Gallard's theory that all non-traumatic cases are extra-uterine pregnancies, a theory which has done its good and has had its day. The intensity and persistance of the local symptoms, the passage of the decidua, and the past or present characteristic symptoms of the pregnant condition should usually prevent such a mistake.

I think, with Dr. Jaggard, that Bandl would have us operate too early; I only claimed that Bandl's views were a great advance in the therapeutics of pelvic effusions, in that, while recognizing the dangers of early interference, he does not

allow the fear of inducing septicæmia to intimidate him into waiting until septicæmia has already accomplished its mischievous and perhaps fatal work. The reason why Bandl's latest views have had so little apparent effect upon the profession, is that they have only been before the profession at large for a few months. I had come to the conclusion that with our present knowledge of antiseptics we need not be frightened out of opening up these accumulations, and had acted upon it before I knew of Bandl's views; and so had many others whose veneration for long established authority had not overpowered their individual judgment.

A. Martin's method of operating for hæmatoceles and hæmatoma is *one* method, but that it is *the* method cannot be maintained upon scientific grounds so as to convince the profession; nor has it as yet been so proved by its success. As to the frequent bunglesomeness of operations *per vaginam* and *per rectum*, there is scarcely to be found an opportunity for the bungler like the performance of laparotomy for pelvic disease. I doubt if I exaggerate in saying that half of the abdominal sections are done in a bungling manner, especially when compared to those of Martin and a few others.

In my paper I advocate the expectant plan of treatment, and have used it, and so far succeeded with it, in all of this series of cases except one. That case was operated upon because the conditions for a cure without an operation were not attainable; because even if attainable, they would have taken too much time to restore the patient to usefulness; and because if properly done, the operation in such a case is almost devoid of danger. I regard it as a good illustration of when we may operate in case the expectant plan does not afford relief. In Case VI, Mary H., which I have just reported, I shall use every

effort to do without surgical interference, because the interior of the sac cannot be easily and safely reached.

Protheroe Smith, M.D., M.R.C.P., of London, was then elected Honorary Fellow of the Society.

W. W. JAGGARD, M.D., *Editor*.

2330 Indiana avenue, September, 1886.

ABSTRACTS.

ST. BARTHOLOMEW'S HOSPITAL REPORTS. EDITED BY W. H. CHURCH, M. D., AND JOHN LANGTON, F. R. C. S. *Vol. XXI. London:* SMITH, ELDER & CO., *1885*.

The regular articles of the reports are preceded by a List of Subscribers, a Memorial Article on Francis Harris, M. D., late Demonstrator of Morbid Anatomy at St. Bartholomew's, and a reprint of the English translation of "The Book of the Foundation of St. Bartholomew's." In this reprint the spelling of the original translation is retained. According to this book, "* * * the Priory and the hospital by olde tyme longing to the same," were founded in the year 1119, by one Rayer, in accordance with the command to do so, given him in a vision by the patron saint of the institution. Of the twenty-eight chapters in the book, twenty are devoted to descriptions of the miraculous cures accomplished. In addition to the interest which this reprint has for all St. Bartholomew's men, it is interesting as a sample of English prose of the time of Edward II. The reports cover the general field of medicine and surgery, and represent the experience of the Hospital during the year.

The following is a list of the titles of the articles contained in this volume, viz.: On the Amount of Destructive Impulses in the Insane, Cases Resembling General Paralysis of the Insane, Note on Tuberculous Tumors of the Larynx, On the Presence of the Tubercle Bacillus in Old Specimens of Diseased Lung, Profuse Non-Fatal Pulmonary Hæmoptysis, Five Cases of Functional Nervous Disorder, Cases from Mr. Willet's Wards, Notes of Three Cases of Coal-Gas Poisoning, The After Treatment of Tracheotomy, Two Cases of Parasitic Hæmaturia, Some Cases of Sclerosis of the Spinal Cord, On the Nature and Origin of Rodent Ulcer, Clinical Contributions to Practical Medicine, Two Contributions to Renal Surgery, Variola as Seen in the Casualty Department, A Contribution to the Topographical Anatomy of the Spinal Cord, From the Department for Diseases of the Larynx, Cases of Mental Disturbance after Operations, A Case of Lead Poisoning With Bosses in the Metacarpal Bones, Parametritis and Abscess of the Liver, The Formation of Abnormal Synovial Cysts in Connection with the Joints, On the Breath Sounds in Health and Disease, Cases from Dr. Church's Wards, Notes on the Six Gifts of Theophilus Philanthropos or Robert Poole, and Proceedings of the Abernethian Society for Winter Sessions of 1884-5.

Dr. T. Claye Shaw, in his article on "The Forecast of Destructive Impulses in the Insane," states the following conclusions, viz.: "That the destructive state is one result of a certain condition of brain, and may exist in its greatest intensity without consciousness. That it is especially frequent in those cases of brain disease attended with weak or irregular action of the heart. That epilepsy, the insanity of old age, puerperal insanity, masturbational insanity, and imbecility, are liable to exhibit it. That inasmuch as brain disease is rarely

stationary in its extent, and often proceeds insidiously, it is impossible to deny that any insane person may develop the destructive faculty. That persons may be the reverse of a melancholy disposition and yet most suicidal." Dr. Shaw thinks that in most cases the destructive tendency is due to cerebral anæmia, directly caused by irregularity in the action of the heart. In support of his opinion, he says that it exists in many cases of dyspepsia accompanied by irregular action of the heart, and in the cases of masturbators, and that in cases in which the attacks are preceded by depression and melancholy they may be aborted by the use of stimulants. His concluding sentence is, "However great our experience may then be, we are occasionally deceived by the exhibition of dangerous and destructive acts where they were not expected; but if we keep prominently before us the condition of the heart and the vaso-motor system, with especial reference to their causation of a sudden anæmic state of the brain, we have, in my opinion, a trustworthy warning which will justify us in taking steps which we shall find afterwards no reason to regret."

By the term "old specimens of diseased lungs," Dr. Harris refers to specimens preserved in alcohol for many years. He reports examinations of ten specimens taken from the museum, all put up before the year 1846, and some probably as early as the year 1812. The method of staining, which was most successful, was the Ehrlich-Weigert. In one specimen of about the year 1812, no bacilli were found, but in all of the others they were found abundant. Dr. Harris promises a further account of other specimens.

Seven cases of membranous laryngitis, in which the symptoms were sufficiently urgent to necessitate tracheotomy, are reported by S. Herbert Habersham, M.B. Two of these re-

sulted fatally, through conditions entirely beyond control, and independent of the tracheotomy. The cases are reported to illustrate, first, the theory that the treatment of the throat is of much less importance than the nourishment of the patient, and second, to describe the methods used to feed the patients, and to clear the trachea in those cases in which this is necessary. In feeding, during the time when the child will not swallow sufficient food for its nourishment, liquid food was used, and from two to four ounces given every two to four hours, according to the indications in each case. In one case reported, that of a child two and one-half years old, it was observed that just before the feeding time the patient was subject to fits of dyspnœa and coughing, apparently due to exhaustion. Upon the food being given every three, instead of every four hours, these symptoms disappeared, and did not return. The method of introducing the food into stomach is by means of a brass syringe fitted to an ordinary number 4 or 6 English flexible catheter, which is passed through the nose into the stomach. Dr. Habersham says that the introduction of the tube is quite easy. It is indeed difficult to pass it into the trachea, and that when it does it will pass only a few inches, and that the irritation produced is a sure indication for its withdrawal. The introduction is usually easy after the first attempt, and upon one occasion a patient was fed during sleep without being awakened. In introducing the tube the manipulation is exactly that of the introduction of the eustachian catheter. For the purpose of cleaning the trachea, the closed end of a soft-rubber catheter, No. 4 to 6, is clipped off and then connected with a small brass syringe. "It is rapidly passed through the tracheotomy tube down the trachea as far as possible, regardless of the patient's increased dyspnœa, and firmly nipped by the finger and thumb just outside the opening into the

trachea. The nurse holding the syringe is then directed to exhaust it by drawing up the handle rapidly. When this is done the finger and thumb are suddenly let go, and the whole force of suction is transferred to the end of the catheter in the trachea. The catheter is then slowly withdrawn." The method as described is very efficient, and may be repeated as frequently as necessary and exhausts the child less than its own ineffectual efforts at expiration.

In this, his second, communication on The Formation of Abnormal Synovial Cysts in Connection with the Joints, Mr. W. Morrant Baker calls attention to his first communication, which appeared in the 13th volume of the St. Bartholemew's Hospital Reports. In all of the cases reported in the first paper the knee joint was involved. In the present communication two cases are reported in which the cysts occurred in connection with the shoulder-joint, two with the elbow-joint, one with the hip-joint, and one over and below the external malleolus. Mr. Baker quotes the conclusions stated in his first report, describes the cases mentioned above, and draws the following conclusions from them:

1. That abnormal synovial cysts may be found in connection, not only with the knee, but in connection with the shoulder, the elbow, the hip, and the ankle-joints.

2. That the manner of the formation of these synovial cysts probably resembles that which has been proved to occur in connection with the knee-joint, namely, that the synovial fluid, upon reaching a certain amount of tension, by accumulation within the joint, finds its way out in the direction of least resistance, either by the channel by which some normal bursa communicates with the joint, or, in the absence of any such channel, by forming first a hernia of the syno-

vial membrane. In both cases, should the tension continue or increase, the fluid at length escapes from the sac, and its boundaries are then formed only by the muscles and other tissues between and amongst which it accumulates.

3. That in the case of the shoulder-joint the abnormal synovial cyst may be found either in front a little below the clavicle, or in the upper arm in the region of the biceps muscle.

4. That in connection with the elbow-joint the cyst is usually placed on the inner side, a little above the internal condyle of the humerus.

5. That in the case of the wrist-joint the synovial cyst may be either in front or behind.

6. In the only case in connection with the hip, in which a note has been preserved, the swelling was in the upper part of Scarpa's triangle.

7. In the one case in connection with the ankle-joint the synovial cyst was in front and to the outer side.

8. That the apparent want of direct communication between the joint and the abnormal synovial cyst is frequently deceptive, and should not lead to the inference that no such communication exists.

9. That the caution given in the previous communication, not to interfere by operation with these synovial sacs without good reason, has been justified by increased experience. "Hitherto I have not discovered any relationship between the form of osteo-arthritis with which some of these synovial cysts are associated, and locomotor ataxy, but I suspect that in some of them a relationship will be found to exist."

The article contributed by Mr. Bullar, "On the Breath Sounds in Health and Disease," is an extension of an account

of some similar experiments which appeared in the Proceedings of the Royal Society, No. 234. The article is accompanied by illustrations of the apparatus used, and the details of the experiments made very clearly described. The nature of the investigations is so technical that a condensation of the article cannot fairly represent it. The author claims, and has proved, that the vesicular murmur is produced where the smallest bronchioles open into the vesicles. The experiments further showed that a lung either moderately filled or distended with air, not itself in motion, is a poor conductor of sound, while one moderately or fully collapsed is a fairly good conductor.

The experiment to determine how the vesicular murmur is produced, resulted only in the negative conclusion that it is not by the movement of the tissues of the lung—Mr. Bullar's article is well worthy of the attention of all who have a special interest in the subject discussed.

"Statistical tables of the patients under treatment in the wards of St. Bartholomew's during 1884," finish the volume, and the whole is furnished with a fairly good index.

E. WING.

ON THE RADICAL CURE OF OBLIQUE INGUINAL HERNIA BY INTERNAL ABDOMINAL PERITONEAL PAD, AND THE RESTORATION OF THE VALVED FORM OF THE INGUINAL CANAL. *By* WILLIAM MAC EWEN, M. D., *of Glasgow, in "Annals of Surgery," August, 1886.*

The author's operation is distinguished by his treatment of the sac and method of closing the inguinal canal. After preliminary shaving, disinfection, anæsthesia, and reduction of the hernia, the initial incision is made downward and inward,

exposing the external ring. The sac and contents are also explored, the abdominal aspects of internal ring, and position of the epigastric artery. The distal end of the sac is then freed, the sac is pulled down and separated from the cord and the canal, and outside of the sac the peritoneum is detached, with a finger, for half an inch around the whole abdominal aspect of the circumference of the internal ring. A catgut thread, single, and fastened at the distal end of the sac is run in and out several times through the sac, then carried on a hernia-needle through the abdominal wall, except the skin, and brought out at the opening made by the incision. An assistant pulls on this thread, gathering the sac into folds, which form a corrugated pad on the abdominal side of the internal ring. The pad is held in place by traction until the sutures closing the canal are introduced, when the thread is secured. To close the internal ring, an oblique single-thread stitch is taken, with a hernia-needle, in conjoined tendon, from its lower border to the highest point possible. The loop is on peritoneal side. The thread-end, from the lower puncture-point of the stitch, is carried, with a hernia-needle, at a point directly opposite, through the Poupart's ligament and the aponeuroses of the transversalis, and the internal and external oblique. The thread-end from the upper puncture-point, at a point opposite, through the transversalis and the internal and external oblique. The two ends are tied in reef-knot. Stitches may be taken lower down, if necessary, and in uniting the pillars of the external ring care should be taken in tying not to compress the cord. There should be superficial drainage, with permanent dressing, and elastic compression.

In congenital hernia the sac is freed from the canal, opened and divided transversely in two, preserving the cord. The lower part is formed into the *tunica vaginalis*, the upper part

is pulled down and split longitudinally for the cord to escape, and is closed by sutures and treated as the sac of acquired hernia. The author prefers catgut for sutures; fourteen to twenty-one day catgut for the deep and for pad, and seven-day catgut for the superficial stitches. Usually but one re-dressing is required. Union is complete in from fourteen to twenty-one days, and the patient is allowed to get up in from four to six weeks. He has thus operated thirty-three times for radical cure of inguinal hernia, in fourteen other cases, after relief of strangulation, and applied the principles in nine cases of femoral hernia, after relief of strangulation. In no case was the operation made where there was a distinct approach to gangrene of the bowel, nor where the sac was firmly adherent next to the femoral vein. There have been no deaths in the series. Firm primary occlusion was obtained in all. There were but few cases of suppuration, and only one was severe. Of the thirty-three, exclusive of two, too recent cases, only one had subsequent need of truss, and that was more from habit. Of the fourteen, three wore a pad and bandage, as precautionary. After the femoral hernias, no truss has been worn.

MARY E. BATES.

BOOK REVIEWS.

DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD, *with Chapters on the Investigation of Disease and on the General Management of Children. By* LOUIS STARR, M. D., *Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, Physician to the Children's Hospital, Philadelphia, etc. With colored plates and other illustrations. Philadelphia:* P. BLAKISTON SON & CO. *Chicago:* W. T. KEENER. *1886.*

Dr. Starr's latest work, like his other writings, is pre-eminently practical and interesting. Its object, as set forth in the preface, "is to give prominence to a class of disorders constituting a large proportion of the ailments of childhood, but often too briefly considered in works on pædiatrics."

The book is exactly what it professes to be, viz., a monograph on the buccal, gastric, and intestinal lesions of children, no unimportant part of their ailments. It opens with a discussion of the clinical investigation of the diseases of childhood in general, which, while it is good and comprehensive, embraces very little that is new, except, perhaps, the hints in the sections on methods of drinking observed in children.

Section second opens the consideration of the diseases of the digestive tract with those of the mouth. More is here made

of catarrhal stomatitis than the experience of the majority of general practitioners would justify. In fact, Dr. Bush would probably claim Prof. Starr's catarrhal stomatitis was really his œsophagitis under another name; and Dr. Starr's treatment really looks that way, as it is apparently directed more towards the gastric than to the buccal mucous membrane. Aphthous stomatitis evidently is considered to have the same ætiology, for it is similarly dealt with, and chlorate of potash, which in these cases is almost a specific, is only spoken of as a local application. On the other hand, it is highly recommended in ulcerative stomatitis, where, unfortunately, it generally disappoints, whether given internally or locally applied. Perhaps the fresh air and stimulants so highly spoken of in the treatment of these cases may have had much to do with the success of the potassium chlorate treatment, which under other surroundings would have failed. Noma, thrush and the sympathetic troubles of difficult dentition conclude the diseases of the mouth and present nothing new or of especial interest in either theory or practice. The affections of the throat discussed are simple pharyngitis, catarrh of the tonsils, follicular tonsilitis, abscess and hypertrophy of the tonsils and retropharyngeal abscess. Unlike Professor Pepper, he regards follicular tonsilitis as always favorable in prognosis, and only by the most inexperienced to be confounded with diphtheria.

There certainly is very little resemblance between the irregular follicular deposits of the first and typical diphtheritic membrane; and yet it ought always to be kept in mind that about these innocent, cheesy dots diphtheritic membrane may and often does form, and that, whether or

no there is a specific virus about them, they not infrequently attack the members of a family in succession, even when they have not been exposed to what Dr. Starr considers their most efficient cause, viz., a children's party.

The section on the affections of the stomach and intestines is the best in the book; its special value being in the very great care taken in the preparation of special diet tables for particular forms of indigestion. Dietetic rules in these cases are too often so general that it is exceedingly satisfactory to find an author explicit in his directions as to exactly what and when the child shall be fed. This is what Dr. Starr does emphatically, whenever the question of diet is an important factor in the treatment of the case, and some of his diet tables, as that for mucous disease, are models of their kind and invaluable. In fact, the book might be justly entitled "The Dietetics of Children, Sick and Well," so largely does this feature appear—and wisely, too, we might add—for success or failure in treatment of a sick infant often turns on as seemingly an unimportant matter as a few inches of dirty rubber tubing in a lazy mother's nursing-bottle, to which, by the way, Dr. Starr pays his respects, and advises that in every case of a bottle-fed child the physician should insist upon seeing, himself, the bottle used in feeding. The work abounds in just such common-sense hints, and is both timely and helpful to all who have occasion to treat children. Its differential diagnoses are pre-eminently practical, and its pathology full enough for any one except the pedant who prefers its minutiæ to success in practice. At times scarcely care enough has been taken to make his mixtures palatable for children, and his use of stimulants is freer than would be pleasing to the Weeks-Burnett combination; but these are

trifling defects, if any, and Dr. Starr's *Diseases of the Digestive Organs* is a valuable addition to the American literature of pædiatrics. M. P. H.

ELEMENTS OF SURGICAL DIAGNOSIS. *By* A. PEARCE GOULD, M. S., M. B., *Lond.*, F. R. C. S., *Eng.; Assistant Surgeon to Middlesex Hospital, etc. Large 16mo, pp. 584. Philadelphia:* HENRY C. LEA'S SON & CO. *Chicago:* A. C. MCCLURG & CO.

This effort presents in a concise form the symptoms of many surgical diseases, and groups together those diseases which have certain symptoms in common, pointing out the method of making the differential diagnosis between them. Its chief value lies in its plan of arrangement, making it a practical ready-reference book for refreshing the memory of the young practitioner or advanced medical student. The points made by the author are based upon a sound knowledge of the principles and practice of surgery.

The writer deserves credit for the systematic presentation of the various subjects. F. C. S.

MANUEL DES INJECTIONS SOUS-CUTANEES. *Par* BOURNEVILLE, *Médecin de Bicêtre, et* BRICON, *Docteur en Médecine. 2me Edition, revue et augmentée. Duodecimo, pp. xl, 200. Paris.*

The second edition of this work is a proof that the method of treating by hypodermic injection is becoming quite common, at least in Europe, whether due to success or to the good nature of Europeans in giving themselves for experimental purposes.

Hypodermic injections being not free from danger of inflammation and abscesses in many cases, it would not be well

for a beginner or inexperienced physician to use many of the drugs which are only on trial yet, and from which the results are variable, and often dangerous.

Attention is called to the new drugs and the best vehicle for each one; also how to make hypodermic injection in order to avoid accidents; the care of the syringe, etc.

The hypodermic method may commend itself to the physician who is fond of experiments; but it may not be found equally so for the patient who is sick from a disease which requires frequent administration of medicine hypodermically.

The reader is left to conjectures, as the author does not state whether he believes that the hypodermic method will be the one *par excellence*, or only to be resorted to when it is impossible to introduce medicines into the system through the stomach. Aside from this the book is a good one and well written. D. D.

MANUEL DE TECHNIQUE DES AUTOPSIES. *Par* BOURNEVILLE *et* P. BRICON. *Duodeceimo, pp. xii, 240. Paris.*

This is an interesting work on post-mortem examinations; when and how to make them.

For internes in hospitals, this little volume is an invaluable guide; but in private post-mortem examinations, as well as those performed before a class, it would be impracticable to observe all the details suggested by the authors. In many cases time is too limited to admit it.

In order to profit most by it, post-mortem examination ought to be made as soon after death as possible.

This volume has two objects in view—

1. To attract attention to the importance of careful ob-

servation in autopsies, and to encourage correct teaching of pathological anatomy.

2. To teach students to make better and quicker post-mortem examinations in hospitals.

The work is clear and concise, and deserves to be welcomed by physicians and students, and especially by the pathological anatomist. D. D.

THE BLOT UPON THE BRAIN. *Studies in History and Psychology. By* WILLIAM W. IRELAND, M. D. (*Edin.*) *New York:* G. P. PUTNAM'S SONS. *Chicago:* W. T. KEENER. *Octavo, pp. viii, 374. 1886.*

This work is made up of a number of sketches and short articles which have appeared from time to time in the *Journal of Mental Science* and in *Brain.* Most of the historical essays are of great interest, notably those treating of the hallucinations of Mohammed, Luther and Swedenborg; and paper four, on the insanity of power, as illustrated by the Claudian–Julian family, Mohammed Toghlak, and Ivan the Terrible. The value of the book depends upon the value of each essay. There is no connection further than a common binding and an index. The reader will find much of value, that he will look for in vain elsewhere.

H. N. M.

TRAITE ELEMENTAIRE D'ANATOMIE MEDICAL DU SYSTEME NERVEUX. *Par* CH. FERE, *Médecin-adjoint de la Sapêltrière, Paris. Aux Bureaux du Progrès Médical. Octavo, pp. 493. 1886.*

The reader expecting to find in this work anything original, or valuable discussions on the mooted points in cerebral

anatomy, will be greatly disappointed. Yet the work is of value and should be translated into English, as we have no similar work in our tongue. The merit of the work lies in its clear and concise arrangement, and the successful application of anatomical facts to the elucidation of diagnostic problems,—the grand difficulty for the beginner in neurology.

H. N. M.

A MANUAL OF THERAPEUTICS. *Considered with Reference to Articles of the Materia Medica. By* EDWARD JOHN WARING, C. I. E., M. D., *Fellow of the Royal College of Physicians, London. Edited by* DUDLEY W. BUXTON, M. D., B. S. (*Edin*). *Philadelphia:* P. BLAKISTON, SON & CO. *Chicago:* W. T. KEENER. *Fourth edition. Small octavo, pp. xxix, 666. 1886.*

In too many cases we pick up a so-called "new edition" of an old work and find it merely a reprint; this is not, however, the case with the present one. It has been thoroughly revised, and much new matter added. The searcher will find almost all the latest therapeutic novelties that have stood in any way the test of experience. The references to the literature of the subject are very full and, with the well arranged index, add much to the value of the work.

MEDICAL AND SURGICAL DIRECTORY OF THE UNITED STATES. *Published by* R. L. POLK & CO, *Detroit.*

This work contains the names of all the physicians in the United States, arranged alphabetically and by localities. In addition the local and state laws relating to physicians and

public health, medical colleges, medical journals, national, state and local medical societies, and, in fact, all information relating to physicians is given in a very full manner. The work is well arranged and easy of reference. It represents an almost incalculable amount of work in accumulating the data upon which it is based, and is of great value to physicians and to others. The publishers deserve a substantial return for the good work they have done in preparing and issuing this directory, which seems to be exceptionally accurate.

THE METHODS OF BACTERIOLOGICAL INVESTIGATION. *By* DR. FERDINAND HUEPPE, *Docent in Hygiene and Bacteriology in the Chemical Laboratory of R. Fresenius at Wiesbaden. Translated by* HERMANN M. BIGGS, M. D. *Octavo, pp. 218. New York:* D. APPLETON & CO. *Chicago:* A. C. MCCLURG & CO.

The translator was induced to present the work of Dr. Hueppe to the American public because of the want in English of a satisfactory text-book for the students working under his direction in the Carnegie Laboratory.

Of theoretical and polemical treatises on bacteriology there is no lack, many of them having been written by those who do not understand the first principles of bacteriology, and who could not give any idea of the relative value of solid and fluid culture-media. To such the careful study of this volume might prove advantageous.

The work is written largely from the standpoint of the Berlin School by a pupil of Geheimrath Koch, and presents many of his peculiar views and methods. It is divided into

seven parts respectively: 1. Spontaneous generation and the principles of sterilization. 2. Forms of bacteria and microscopical technique. 3. Culture-methods. 4. Inoculations for the determination of the casual relation of bacteria-growth to decomposition and disease. 5. General biological problems. 6. Special hygienic investigation. 7. Bacteriology as an object of instruction.

As a text-book it is clear and concise, and we trust will do much to stimulate the study of this important branch of biological research in this country. The English of the book could in many cases be criticised, but one familiar with the curt idioms of the original will readily overlook this.

H. N. M.

ESSENTIALS OF VACCINATION: *a compilation of facts relating to Vaccine Inoculation and its Influence in the Prevention of Small Pox. By* W. A. HARDAWAY, M. D., *12mo, pp. 145. St. Louis:* J. H. CHAMBERS & CO., 1886. *Chicago:* W. T. KEENER.

The author has succeeded in presenting the most essential facts of vaccination, in a limited compass, and in an agreeable manner. The necessity for this book is apparent in the erroneous views held by many of the profession regarding vaccination, and the careless manner in which the operation is too often performed.

Great stress is laid on the efficiency of vaccination in estimating the protection afforded. Marston's tables are quoted, in which he clearly proves that the best vaccination is some thirty times more protective than the poorest. The author clearly gives his preference for bovine over human-

ized virus, in which it is probable that the majority of the profession in this country will agree with him. Excellent instruction is given in the methods of obtaining and storing virus, and also the manner in which the operation should be performed. Here the work seems to be open to criticism. He advises the use of a *clean* lancet, or else the ivory point, in scarifying, which is recommended rather than puncture or incision. Nothing is said about the arm being clean, also the hands of the operator, and using Lister's protective, and a layer of antiseptic cotton confined by a wire vaccination protector; in other words, carefully protecting the wound from all external infection. The adoption of this precaution will, we are sure, exclude many of the untoward results mentioned in the book. The work closes with a concise account of the principal objections to vaccination.

THE BEST PRELIMINARY EDUCATION FOR THE STUDY OF MEDICINE. *By* EDWARD S. STEVENS, M. D. *Being the* BOYLSTON PRIZE ESSAY, 1885. *The Western Star Print, Lebanon, Ohio.*

The opening sentence of this work reads: "This essay will be written from an American standpoint." It would have been more correct to have said, this essay will be written from the standpoint of one individual American, and addressed to a select *coterie* of medical gentlemen in an eastern city. In marked contrast to the narrowness of this work is the comprehensive view taken of the subject of American medical education in the address delivered before the British Medical Association at its last annual meeting by Dr. J. S. Billings.

Incidentally, we may express a doubt as to the general utility of prize essays, and of this one in particular.

MEDICINE OF THE FUTURE. *An Address prepared for the Annual Meeting of the British Medical Association in 1886, by* AUSTIN FLINT (SENIOR), M. D., LL. D. *New York:* D. APPLETON & Co. *Chicago:* A. C. MCCLURG & Co.

This memorial volume is beautifully issued by the Appletons, on extra heavy paper with wide margins and double leaded lines. An excellent autotype of the author faces the title page.

The address itself must excite widespread attention, as the last work of one of the most commanding figures in American medicine.

PRACTICAL HUMAN ANATOMY. *A Working-guide for Students of Medicine, and a Ready Reference for Surgeons and Physicians. By* FANEUIL D. WEISSE, M. D. *Illustrated by 222 lettered plates, containing 321 figures; pp. vii, 456. New York:* WILLIAM WOOD & Co., *1886. Chicago:* W. T. KEENER.

The author has made a determined effort to overcome some of the chief difficulties surrounding the study of practical anatomy. That he has succeeded in a great measure, is disclosed by even a superficial examination of the work.

It is divided into twenty-seven dissections, each one of which consists of a descriptive text, followed by the plates necessary to its illustration. These latter are rendered especially valuable to the dissector by the plate references in the text. The student is thus enabled to verify his work by the plates, and to advance without confusion through the different parts of a dissection.

Twenty of the plates are selected from various works, and the remainder are reproductions of original drawings made from the author's own dissections. Too much praise cannot be given this part of the work, both for accuracy and high mechanical finish.

The publishers have issued the work in a creditable manner.

A MANUAL OF AUSCULTATION AND PERCUSSION; EMBRACING THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART, AND OF THORACIC ANEURISM. *By* AUSTIN FLINT, M. D., LL. D., *Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, etc., etc. Fourth Edition, thoroughly Revised and Enlarged. Illustrated with fourteen woodcuts. Duodecimo, pp. xii, 280. Philadelphia:* LEA BROTHERS & CO. *Chicago:* JANSEN, MCCLURG & CO., *1885.*

This manual no longer requires extended notice. The celebrity of its author and the merit of previous editions assures for it continued recognition as an authority on the subjects of which it treats. The different physical signs, together with the normal and pathological conditions on which they depend, are first described, and then the various diseases of the chest are discussed in relation to differential diagnosis by physical examination; an arrangement which furnishes to the practitioner a means of ready reference, and to the student a useful reiteration of the contents.

Discussion of doubtful points in the mechanism of signs is expressly waived. This is very well for the sake of brevity, but unsatisfactory in other particulars. One naturally inquires

why a vesiculo-*tympanitic* resonance is obtained by percussing over the condensed lung above a pleuritic effusion.

The book is written in a pleasant colloquial style, calculated to enhance the interest of the reader, while at the same time the phraseology is clear and concise. W. E. C.

MANUAL OF OPERATIVE SURGERY. *By* LEWIS A. STIMSON, B. A., M. D., *Surgeon to the Presbyterian and Bellevue Hospitals, Professor of Clinical Surgery in the Medical Faculty of the University of the City of New York, etc. Second Edition, with 342 illustrations, pp. 506. Philadelphia:* LEA BROTHERS & CO. *Chicago:* JANSEN, MCCLURG & CO.

In this interesting and practical work, which is in its second edition, the principal changes from the former edition will be found, as the author states in his preface, "in the manner of operative procedures brought about by the antiseptic method of treating wounds, and of excision of bones and joints, and operations in which the peritoneal cavity is opened." The directions for operations are clear and concise, and sufficiently minute in details and in the regional anatomy of the parts, to be easily understood by all who have a reasonable knowledge of the subject.

The illustrations, which are three hundred and forty-two in number, are especially worthy of note, as they are well executed, and many times make a more clear and lasting impression on the mind than could be gained by a study of the text alone. The typographical work in the book is very good. F. W. C.

BOOKS RECEIVED.

Causes de la Morbidité et de la Mortalité de la Première Enfance. Par le Docteur Emil R. Coni, Imprimerie de Paul Emile Coni, Buenos Ayres.

A System of Practical Medicine by American Authors. Volume V. Diseases of the Nervous System. Philadelphia: Lea Brothers & Co. Chicago: A C. McClurg & Co.

A Reference Hand-book of the Medical Sciences. Volume III. New York: William Wood & Co. Chicago: W. T. Keener.

Handbook of Practical Medicine. By Dr. Hermann Eichorst. Volume II. Diseases of the Digestive, Urinary and Sexual apparatus. New York: William Wood & Co. Chicago: W. T. Keener.

An Introduction to General Pathology. By John Bland Sutton, F.R.C.S. Philadelphia: P. Blakiston, Son & Co. Chicago: W. T. Keener.

The Genuine Works of Hippocrates. Volume II. Translated by Francis Adams, LL.D. New York: William Wood & Co. Chicago: W. T. Keener.

Diseases of the Stomach and Intestines. By Professor Dujardin-Beaumetz. New York: William Wood & Co. Chicago: W. T. Keener.

A Manual of Dietetics. By J. Milner Fothergill, M.D., Edin. New York: William Wood & Co. Chicago: W. T. Keener.

The Refraction and Accommodation of the Eye and their Anomalies. By E. Landolt, M.D. Philadelphia: J. B. Lippincott Co. Chicago: W. T. Keener.

A Manual of Practical Therapeutics. By Edward John Waring. Fourth Edition. Philadelphia: P. Blakiston, Son & Co. Chicago: W. T. Keener.

Manual of Differential Medical Diagnosis. By Condict W. Cutler, M.S., M.D. New York and London: G. P. Putnam's Sons. Chicago: W. T. Keener.

A Treatise on Electrolysis. By Robert Amory, A. M., M. D. New York: William Wood & Co. Chicago: W. T. Keener.

Index Catalogue of the Library of the Surgeon-General's Office, U. S. A. Vol. VII.

A Treatise on the Practice of Medicine. By Roberts Bartholow, M. A., M. D., LL. D. Sixth Edition. New York: D. Appleton & Co. Chicago: A. C. McClurg & Co.

Paralysis, Cerebral, Bulbar and Spinal. By H. Charlton Bastian, M A., M. D., F. R. S. New York: D. Appleton & Co. Chicago: A. C. McClurg & Co.

A Text-Book of Physiology. By Dr. L. Landois. Philadelphia: P. Blakiston, Son & Co. Chicago: W. T. Keener.

Rheumatism; its Nature, its Pathology and its Successful Treatment. By T. J. Maclagen, M. D. New York: William Wood & Co. Chicago: W. T. Keener.

A Manual of Minor Surgery and Bandaging. By Christopher Heath, F. R. C. S. Philadelphia: P. Blakiston, Son & Co. Chicago: W. T. Keener.

The Healing of Arteries After Ligature in Man and Animals. By J. Collins Warren, M. D. New York: William Wood & Co. Chicago: W. T. Keener.

Guy's Hospital Reports. Vol. XLIII. London: J. & A. Churchill.

PAMPHLETS RECEIVED.

A Contribution to the Pathology of Hemianopsia of Central Origin. By E. C. Seguin, M. D.

Clinical Lectures on Orthopædic Surgery. By A. Sidney Roberts, M. D.

Report of the Delegates from the Philadelphia County Medical Society.

The Value of the Knee Phenomenon in the Diagnosis of Diseases of the Nervous System. By Phillip Zeemer, M. D.

Permanent Drainage for Ascites. By Llewellyn Elliot, M. D.

Medical Education and Medical Licensure. By William H. Watson, A. M., M. D.

Report of the Quarantine System of the St. Lawrence.

Meconeuropathia. By C. H. Hughes, M. D.

Quelques Cas D'Epilepsie. Par le Dr. P. Glatz.

Preliminary Analysis of the Bark of the Fonquieria Splendens. By Helen C. DE S. Abbott.

Yucca Augustifiia. By Helen C. DE S. Abbott.

Permanent Removal of Hair by Electrolysis. By Samuel E. Woody, A. M., M. D.

Intubation of the Larynx for Diphtheritic Croup. By E. Fletcher Ingals, A. M., M. D.

Impetigo Contagiosa. By E. J. Beall, M. D.

Electrolysis in Gynecology. By Franklin H. Martin, M. D.

The Non-Identity of Croupous Tonsillitis and Diphtheria. By L. Emmett Holt, A. M., M. D.

Simultaneous Double Amputation. By Brice M. Hughes, M. D.

Ligation of Internal Iliac. By W. Locke Chew, M. D.

Transactions of the Louisiana State Medical Society. Eighth Annual Session.